A deep inquiry into poor households' food security status and foodways: Evidence from four urban and rural households in Maseru District, Lesotho

by

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Declaration

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Abstract

Food insecurity remains one of Lesotho's most pressing challenges, hindering the country's economic and social development. The state of food insecurity in the country is being significantly altered by health-related phenomena, including the nutrition transition, the "multiple burden of malnutrition", and very high HIV/AIDS prevalence. This challenge is further complicated by mounting environmental pressures, land degradation and the advent of climate change. Adding to this picture are socio-economic stressors such as persistent and widespread poverty, low economic growth, rapid urbanisation and concomitant livelihood changes. In order to develop successful food security interventions, it is essential that the realities and needs of poor, food-insecure households be well understood. It is particularly important to identify whether and how the distribution and level of household food insecurity vary across geographical locations and settlement patterns.

The main objective of the present study was to explore the multiple meanings of food security through the lived experiences of rural and urban households in Maseru, Lesotho. Interrogating assumptions around the rural and urban dimensions of food insecurity, the study used a mixed methods research approach that combined participant observation, in-depth, semi-structured interviews, and a robust household survey developed for the purpose of assessing food insecurity in the two regions. The findings from the quantitative survey provided a valuable snapshot of participating urban and rural households' food insecurity status, while the ethnographic exploration of food and foodways in these households allowed for a deeper analysis of the complex processes involved in what it means and how it feels to be food insecure.

The themes that emerged from the data were divided into four categories: current practices (around food availability, access and utilisation), gender roles, farming traditions and household coping strategies. The survey findings reveal that all the sampled households, in both urban and rural regions, are severely food insecure. All the participants suggested that they occasionally lacked sufficient quantities of safe, nutritious and preferred food, with one of the urban households experiencing this lack more frequently. While some similarities emerged in the drivers as well as the consequences of food insecurity in urban versus rural Maseru, the primary factors governing food insecurity varied across the two regions. The study identified variations not only in food insecurity determinants and experiences across the two

regions but also within households in the same region. These variations are partly the result of a complex interweaving of elements from both “modern” urban food systems and “traditional” rural food systems, which were found to co-exist within each region in Maseru. More generally, these variations call for context-specific conceptual framings and policy responses. Despite the persistent levels of food insecurity in Maseru, this study suggests that the opportunities for supporting and enhancing the food security of the poor are embedded in households’ everyday lives and food practices. The findings highlight the significance of devising food security measures that take into consideration the shifting economic, social and cultural food practices of the poor in both rural and urban regions.

Opsomming

Voedselonsekerheid bly een van Lesotho se grootste uitdagings: dit hou die land se ekonomiese en sosiale ontwikkeling terug. Die stand van voedselonsekerheid in dié land word beduidend beïnvloed deur gesondheidsverwante kwessies, insluitend die voedingsoorgang, die veelvoudige las van wanvoeding, asook die baie hoë voorkoms van MIV/VIGS. Hierdie uitdagings word verder bemoeilik deur toenemende druk op die omgewing, grondaftakeling en die koms van klimaatsverandering. Bydraend hiertoe is sosio-ekonomiese stresfaktore soos aanhoudende en wydverspreide armoede, lae ekonomiese groei, versnelde verstedeliking en gepaardgaande veranderinge in hoe mense 'n bestaan maak. Om suksesvolle ingrypings vir voedselsekerheid te ontwikkel is dit noodsaaklik dat die werklikhede en behoeftes van mense in arm, voedselonsekere huishoudings goed verstaan word. Dit is veral van belang om te identifiseer hoe en waar die patrone en verspreiding van huishoudelike voedselonsekerheid oor geografiese liggings en nedersettingspatrone heen verskil.

Die hoofdoel van hierdie studie was om die veelvuldige betekenisse van voedselsekerheid te ondersoek deur middel van die ervarings van landelike en stedelike huishoudings in Maseru, Lesotho. Ten einde aannames oor die landelike en stedelike dimensies van voedselonsekerheid te toets, het die studie die gemengde-metode benadering gevolg – 'n kombinasie van deelnemerswaarneming, diepgaande, semi-gestruktureerde onderhoude en 'n robuuste huishoudelike opname – met die oog op die beoordeling van voedselonsekerheid in dié twee streke. Die bevindinge van die kwantitatiewe opname het 'n waardevolle blik gebied op die deelnemende stedelike en landelike huishoudings se voedselonsekerheid, terwyl die etnografiese verkenning van voedsel en voedselweë in hierdie huishoudings 'n dieper analise moontlik gemaak het van die ingewikkelde prosesse betrokke by wat dit beteken en hoe dit voel om blootgestel te wees aan voedselonsekerheid.

Die temas wat uit die data na vore gekom het, is in vier kategorieë verdeel: huidige praktyke (betreffende voedselbeskikbaarheid, -toegang en -gebruik), genderrolle, landboutradisies en huishoudings se strategieë om hul omstandighede te hanteer. Die bevindinge wys dat al die huishoudings in die studie – in sowel stedelike as landelike gebiede – erg voedselonseker is. Al die deelnemers het aangedui dat hulle soms onvoldoende hoeveelhede veilige en voedsame kos van hul keuse gehad het, met een huishouding in die stedelike omgewing wat dít meer gereeld ervaar. Ondanks ooreenkomste tussen landelike en stedelike Maseru wat sowel die oorsake as gevolge van voedselonsekerheid betref, verskil die primêre faktore wat

voedselonsekerheid in die twee gebiede beïnvloed. Die studie het variasies geïdentifiseer – nie net ten opsigte van wat voedselonsekerheid bepaal en hoe dit in die twee gebiede ervaar word nie, maar ook binne huishoudings in dieselfde gebied. Hierdie verskille is gedeeltelik die gevolg van die komplekse vervlegting van beide “moderne” stedelike voedselsisteme en “tradisionele” landelike voedselsisteme, wat saam in albei gebiede van Maseru aangetref is. In die algemeen vra hierdie variasies vir konteksgebonde konseptuele formulering en beleidsreaksie. Ten spyte van volgehoue vlakke van voedselonsekerheid in Maseru, stel hierdie studie voor dat die geleenthede om arm mense te ondersteun en hul voedselsekerheid te verbeter in hul alledaagse lewens, huishoudings en voedselgebruike aangespreek moet word. Die bevindinge beklemtoon die belang van voedselsekerheidsmaatreëls wat die wisselende ekonomiese, maatskaplike en kulturele voedingspraktyke van arm mense in beide landelike en stedelike gebiede in ag neem.

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List of Acronyms and Abbreviations

AFSUN	African Food Security Urban Network
BoS	Bureau of Statistics
CBL	Central Bank of Lesotho
DFID	Department for International Development
ESRC	Economic and Social Research Council
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization of the United Nations
FEWS NET	Famine Early Warning Systems Network
GDP	Gross Domestic Product
HCFPM	Hungry Cities Food Purchases Matrix
HDDS	Household Dietary Diversity Score
HFIAP	Household Food Insecurity Access Prevalence
HFIAS	Household Food Insecurity Access Scale
HIV/AIDS	Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome
IFAD	International Fund for Agricultural Development
IME	Institute for Mechanical Engineers
IPES-Food	International Panel of Experts on Sustainable Food Systems
LRCS	Lesotho Red Cross Society
LVAC	Lesotho Vulnerability Assessment Committee
M&As	Mergers and acquisitions
MAHFP	Months of Adequate Household Food Provisioning
NCDs	Non-communicable diseases
OECD	Organisation for Economic Co-operation and Development
SDGs	Sustainable Development Goals
UNCDF	United Nations Capital Development Fund
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
WCED	World Commission on Environment and Development
WFP	World Food Programme
WFS	World Food Summit
WHO	World Health Organization

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Chapter 1: Introduction

1.1 Introduction

Food, linked to both human health and sustainable development, plays a fundamental role in human life (Capone, Bilali, Debs, Gianluigi & Noureddin 2014). According to Bloom, Canning and Sevilla (2004), there is a substantial, positive and statistically significant effect between good health and a country's aggregate output. Also confirmed by several studies, a healthier population whose diets provide optimal nutrients are mentally and physically energetic to actively participate in a country's socioeconomic sectors and contribute to its development (Fogel 2018; Thomas and Frankenberg 2002). A country's food security status is therefore important for the general welfare of the population.

Food insecurity is an ongoing threat globally and poses one of the major challenges of the 21st century (Jones, Ngure, Pelto & Young 2013). It is significantly impacted by the growing phenomenon of the "multiple burden of malnutrition" (Food and Agriculture Organization of the United Nations [FAO], International Fund for Agricultural Development [IFAD], United Nations Children's Fund [UNICEF], World Food Programme [WFP] & World Health Organization [WHO] 2019), along with the mounting environmental pressures (Campbell, Beare, Bennett, Hall-Spencer & Ingram 2017; International Panel of Experts on Sustainable Food Systems [IPES-Food] 2016). In Lesotho, food insecurity remains a major development hurdle and is significantly impacted by urbanisation and livelihood changes, poverty, and the ongoing human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) pandemic. These factors are heavily intertwined and have a compounding effect, collectively worsening the state of food insecurity in the country (Leduka, Crush, Frayne, McCordic & Matobo 2015).

Most research on food security in Lesotho to date focuses on either urban food security (see Crush & Frayne 2010, 2011; Leduka et al. 2015; McCordic, Crush & Frayne 2018) or rural food security (see Notsi 2012; Rantšo 2016; Stevens & Ntai 2011; Tsepa 2008). A large number of studies concentrate on the national-level issues involved in food security, without making any distinction between rural and urban food insecurity (see Abbot 2002; Brokken 1986; Khoabane & Black 2009; Lebajoa 1992; Mahgoub, Lesoli & Gobotswang 2007; Makenete, Ortmann & Darroch 1997; Mokhele 2011; George 2014; Mukeere & Dradri 2006; Romero-Daza, Himmelgreen, Noble & Turkon 2009; Sebotsa & Lues 2011; Seeiso & McCrindle 2009;

Slater & Mphale 2008; Thamae & Letsoela 2014; Turner 2009). This research is predominantly concerned with the quantitative measures of food security, providing little insight into the lived experiences of the food insecure, or whether these vary across geographical locations and settlement patterns. This study seeks to begin to fill this gap by exploring the multiple meanings of food security in Lesotho, based on the lived experiences of both rural and urban households.

In order for governmental and non-governmental stakeholders to develop successful food security interventions, it is important that the realities and needs of poor, food-insecure households be well understood. It is also important to determine whether the distribution and the level of household food insecurity vary across urban and rural locales. Such an approach is vital since, as Crush and Frayne (2010) argue, the determinants of and solutions for food insecurity in rural versus urban settings are different. This study interrogates assumptions around the rural and urban dimensions of food insecurity, using a "filling in the gaps" form of mixed methods research that integrates both triangulation and complementarity (Bryman, Bell, Hirschsohn, Dos Santos, Du Toit, Masenge, Van Aardt & Wagner 2014). The aim is to enhance the existing understanding of food insecurity by offering a rich and layered account of the lived experiences of Basotho people across the urban–rural "divide" in Maseru, the capital city of Lesotho. In particular, the study's use of quantitative methods provides a snapshot of household food insecurity in Maseru, which is valuable for identifying general patterns as well as overlaps with other studies. On the other hand, qualitative methods allow for an in-depth analysis of the complex, dynamic processes involved in what it means and how it feels to be food insecure.

My research explores the multiple meanings of food security in Maseru, Lesotho, based on the lived experiences of low-income rural and urban households. With this study, I wish to contribute to the efforts of a growing community of researchers, government officials and organisations committed to improving food security, both as a human right and as a sustainable development goal.

1.2 Background

1.2.1 Food security

Given the importance of sound nutrition and health to a functioning society, achieving food security remains one of the most urgent challenges worldwide. This urgency fuels discussions and action among policymakers, practitioners, academics, and governmental and non-

governmental agencies at the national and international level, giving rise to varied definitions and uses of the term "food security".

The term formally emerged in 1974, and by 1991 it had already been mapped in nearly 200 different ways (Maxwell & Smith 1992). More definitions continue to be formulated, each reflecting a specific way of understanding and organising disciplinary priorities. Overall, the term "food security" means different things to different people (see Lang & Barling 2012; Pinstrup-Andersen 2009). It remains one of the most contested, evolving and multi-dimensional policy-related concepts in use today (see Foran, Butler, Williams, Wanjura, Hall, Carter & Carberry 2014; Jones et al. 2013; Maxwell & Smith 1992; Ramp 2014).

The origins of the term can be traced back to the world food crisis of 1972–1974 (Jones et al. 2013; Maxwell & Smith 1992). Before this crisis, food security was merely acknowledged under Article 25 of the Universal Declaration of Human Rights as a basic human right. As a concept, food security was first officially articulated in 1974 at the United Nations World Food Conference (see Battersby 2012). This initial definition of food security was to be understood in relation to the incidence and complexity of global hunger and stemmed from a conventional view of food as a primary need (Clover 2003). Food security was regarded as a production problem, linked mainly to global- and national-level supplies of food items (Lang & Barling 2012). Additionally, the definition emphasised the adequate availability of food made possible through the Green Revolution, which prioritised on the development of improved varieties of high-yielding staple crops along with intensive use of fertilisers and other modern inputs (Pinstrup-Andersen and Hazell 1985).

As food security discussions evolved, scholars began to point out that food availability, although necessary, was insufficient for ensuring food security. In particular, the Nobel prize winner Amartya Sen initiated a paradigm shift in the 1980s that moved the focus from the issue of availability to the issue of access and entitlement (Battersby 2012; Clover 2003). Sen emphasised the significance of food access in shaping food security by underlining conditions in which the poor might still lack entitlements to food even when a country had sufficient food supplies. Following Sen's intervention, food security discussions gradually deviated away from food security being viewed exclusively as a national and international supply phenomenon to, food security as an issue that should also consider household and individual access to food (Upton, Cissé & Barrett 2016). Accordingly, Jones et al. (2013) stipulated that the 1974

definition evolved to include the idea that food security requires both physical and economic access to basic food.

Concerns over the inequitable distribution of and access to basic food within countries and households rapidly developed. Simultaneously, towards the mid-1990s, alleviating micronutrient undernutrition became the key focus of the food security agenda (Jones et al. 2013). While it was not disputed that physical and economic access to food were the necessary conditions for food security, they proved insufficient for ensuring food security within households, and nutritional content became a crucial factor (Barrett 2010). The ongoing concerns around distribution and access, coupled with a growing awareness of micronutrition, led to the continued evolution of the food security discussion, with the attention shifting from mere caloric intake to overall dietary quality. The definition of food security was further revised to incorporate the importance of food utilisation, which involves the ability to obtain socially and culturally acceptable foods with proper nutrition and also proper preparation and feeding practices (Jones et al. 2013; Upton et al. 2016).

As Barrett (2010) explains, the three domains of food security discussed above—availability, access and utilisation—are essentially hierarchical, with availability essential but not sufficient for guaranteeing access, and access, in turn, essential but not sufficient for effective utilisation. Finally, a less commonly recognised and operationalised component of food security is "time" (Ingram 2011; Jones et al. 2013; Maxwell & Smith 1992). Scholars interested in this component recognise that food security is a dynamic matter that often fluctuates over time. They stress that the stability of the other conditions of food security (availability, access and utilisation) impacts on the stability of food security over time, which in turn impacts on current and future food security levels within households (Maxwell & Smith 1992).

These expansions of the concept of food security, in response to shifting food security realities and concerns over time, have informed the current, widely accepted definition of food security. This definition comes from the 1996 World Food Summit (WFS): "Food security at the individual, household, national, regional and global levels exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life" (FAO 1996). The WFS definition views food security as a multi-layered concept encompassing four key aspects: namely, food availability, food access, food utilisation, and the stability of these components over time (Ingram 2011; Jones et al. 2013). Although this definition is contested, its introduction remains

one of the most significant milestones in the history of food security, in terms of its refocusing of food security approaches (Haysom & Tawodzera 2018).

According to Jones et al. (2013), food security can be imagined as a continuum, with food insecurity situated at the opposite end. Based on the definition outlined above, food insecurity becomes the situation that exists in the absence of one or more of the stipulated conditions. It is commonly classified into the following two closely related types: transitory and chronic food insecurity (Jones et al. 2013; Maxwell & Smith 1992). The former denotes a situation in which a household faces a sudden but temporary disruption that leads to a deterioration in the security of its entitlement along with the risk of a failure to meet its food needs over a short-term period (Maxwell & Smith 1992; Upton et al. 2016). The latter, by contrast, implies that a household is constantly at high risk of failure to address the food needs of its members (Maxwell & Smith 1992) and is mostly associated with structural challenges of availability, access or utilisation (Upton et al. 2016).

Post-1996, food security discussions continued to evolve to incorporate multiple concerns beyond the four domains included in the WFS food security definition. Maxwell and Slater (2003) and Jones et al. (2013) suggest that the food security agenda has been enriched over time to encompass issues of nutrition and livelihood security, as well as household models. More recently, further dimensions such as ecological sustainability and resilience have been added to the food security construct (Godfray, Crute, Haddad, Muir, Nisbett, Pretty, Robinson, Toulmin & Whiteley 2010). In the aftermath of the 1987 publication of the World Commission on Environment and Development (WCED)'s *Our Common Future* report (WCED 1987), which instilled a sense of urgency around sustainability and sustainable development issues, 193 member states and governments, including the Government of Lesotho, adopted the 2030 Agenda for Sustainable Development, which was formally endorsed in September 2015. The agenda commits the global community to a shared goal on social, economic and environmental matters over the period 2016–2030 (World Bank Group 2016). It consists of 17 sustainable development goals (SDGs) and 169 associated targets, which set out both quantitative and qualitative guidelines for steering the world towards sustainable development (Sustainable Development Solutions Network 2015). As part of the second sustainable development goal (SDG 2), the agenda calls for countries to end hunger, attain food security, improve nutrition and promote sustainable agriculture by 2030 (FAO et al 2017). The second SDG includes eight targets that support the achievement of a world without hunger and any form of malnutrition.

Persistent food insecurity and malnutrition are chief international concerns, and addressing them is key to achieving SDG 2, other related SDGs, and the 2030 Agenda for Sustainable Development as a whole (Organisation for Economic Co-operation and Development [OECD], FAO & the United Nations Capital Development Fund [UNCDF] 2016). As part of the international community, the Kingdom of Lesotho is committed to the attainment of SDG 2.

1.2.2 Food security in Lesotho

According to the Lesotho Vulnerability Assessment Committee (LVAC) (2016), an estimated 534,502 people—or one in every four people in Lesotho—were at risk of food insecurity in 2016. This food-insecure population had increased by 15.2% from 2015, and the situation was expected to deteriorate further after June 2016, owing to anticipated poor harvests due to the dry weather conditions that prevailed during the 2015 planting season, a loss of income sources for the rural population where agriculture supports the livelihoods of over 80% people and an increase in food prices countrywide following the rise in food prices in South Africa (main source of food imports in Lesotho) (FAO 2016). At the same time, approximately 33% of children in Lesotho were said to experience chronic malnutrition, while over 50% were said to suffer from anaemia (FAO 2016). These findings were reinforced by the FAO (2017), which stated that Lesotho remained one of the most food-deficient countries worldwide.

The vulnerability assessment of 2017 indicated a significant decrease in the food-insecure population from the previous year, from 534,502 people to 306,924 people (224, 664 of whom were living in rural settlements, with the remaining 82,278 living in urban settlements) (LVAC 2017). This improvement in the country's food security situation was associated with increased agricultural production compared to production levels over the previous decade. Nonetheless, the overall production of food in the country remains well below the country's food requirements, resulting in Lesotho being highly reliant on food imports (LVAC 2017). According to the Lesotho Red Cross Society (LRCS) (2009) and the LVAC (2016), Lesotho imports more than 70% of its food from South Africa annually.

To better understand the food security situation in Lesotho, it is essential to recognise the country's historical background and the effect that historical events have had on the population's ability to produce and provide for itself. Historically, the Basotho people were well-regarded farmers who relied on farming and occasional wage employment as complementary means of survival (Quinlan 1996; Trollope 1878 in Turner 2009).

Correspondingly, external development interventions were based on the general perception of Lesotho as a farming economy (Crush & Frayne 2010; Turner 2009). This view of Lesotho as an agrarian country also translated into an assumption that food insecurity could be addressed through adequate food production within its agricultural sector (Turner 2009).

Evidence suggests that, during the 19th century, the Kingdom of Lesotho provided 50–60% of its food requirements, meeting its own domestic demand while also exporting surpluses to neighbouring nations (Economic and Social Research Council/Department for International Development [ESRC/DFID] 2008; Turner 2009). According to Maile (2001), the most important crops in the country included maize, wheat and sorghum, with maize being the most preferred staple. During this period, Lesotho was a wealthy net exporter of grain to the South African diamond mines in Kimberly, and thereafter, to the gold mines in Witwatersrand (FAO 2014). From 1920, however, the prosperity of agriculture in the country declined, and Lesotho ceased to be a net exporter of food commodities (Turner 2009). During the 1970s, national food production dropped further, recording an average farm-yields decline of more than two-thirds (Clover 2003).

By 1984, agriculture had declined drastically, resulting in Lesotho producing only 40% of its own food needs (ESRC/DFID 2008). From the 1990s onwards, Lesotho was only able to produce a third of the food it needed annually (ESRC/DFID 2008). Relatedly, as Quinlan (1996) attests, the country's per capita income from agriculture declined significantly. The share of the agricultural sector's contribution to Lesotho's gross domestic product (GDP) also dropped from 45% at the time of independence from Britain in 1966 to 25% in the 1980s (Maile 2001; WFP 2012). In more recent years, the relative share of agriculture within total GDP has further declined to below 10%, with the lowest share of 6.9% recorded in 2014 (Bureau of Statistics [BoS] Lesotho 2015) (see Figure 1 below).

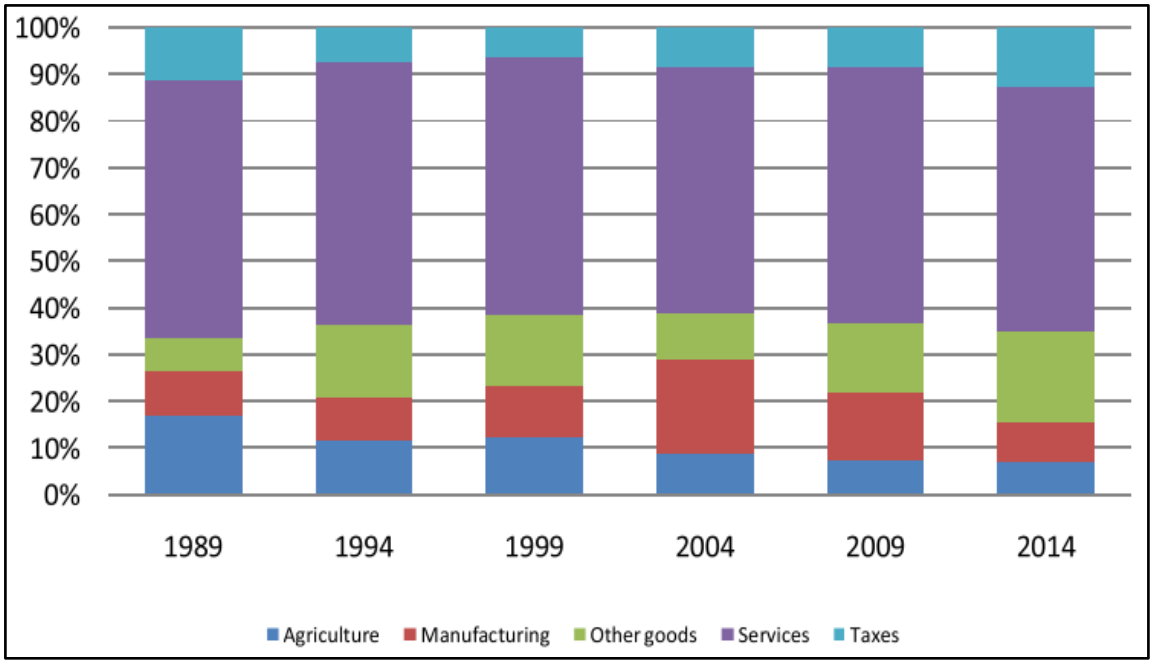

Figure 1: The share of agriculture within total GDP over time (BoS Lesotho 2015)

The deteriorating productivity in the agricultural sector is commonly linked to declining soil productivity (as a result of soil degradation and erosion), the prevalence of droughts and floods, and other aspects of climate variability (Central Bank of Lesotho [CBL] 2011; FAO 2016; Leduka et al. 2015; LRCS 2009; Nseera 2014; Showers 2005). Moreover, Maile (2001) points out that the liquidation of the Lesotho Agricultural Development Bank in 1998 and the reformation of the Lesotho Bank in 1999 resulted in the loss of funding and credit opportunities for farming communities, thus reducing agricultural production further.

Since the 1920s, when Lesotho ceased to be a net exporter of food commodities (Turner 2009), the country has sporadically experienced acute food crises. These include the 1990–1992, 2001–2002, 2004–2005 and 2007–2008 food emergencies, as well as the recent El Niño drought of 2015, all of which led to the country's declaring a national disaster and appealing to the international community for aid (Clover 2003; Famine Early Warning Systems Network [FEWS NET] 2013; FAO 2016; Turner 2009). Most of the food crises in the country have been associated with deteriorating productivity in the agricultural sector.

Due to the persistent decline in agricultural yields, a large portion of Basotho who depended on the agricultural industry for their livelihoods have been forced to source income from outside the industry (FAO 2014; Turner 2009). In search of better opportunities, Basotho have migrated from rural areas to urban areas and also to neighbouring South Africa, where they have sought work in the mines. The mass exodus of Basotho to South Africa has significantly

altered livelihood sources, which have largely become based on remittances from mine workers and from other labourers working outside the agricultural sector (FAO 2014). On the other hand, migration from rural to urban regions of the country has resulted in the rapid rise of urbanisation, from 14.0% of the urban population in 1990 to a projected 42.5% by 2030 (Crush & Frayne 2011).

While urbanisation has been linked to better standards of living and thus serves as an indicator of progress, today the presumption no longer holds (see Swilling & Annecke 2012). Cohen and Garrett (2010) state that rapid urbanisation in many developing nations is pulling poverty into the cities. Escaping rural poverty frequently means getting locked into urban poverty, and this often translates into a lack of the income necessary for food access and other services. Frayne, Crush and McLachlan (2014) point to the severity of the "urbanisation of poverty" in nations in Southern Africa. Evidence for the urbanisation of poverty can be found in the fact that rapid urbanisation in most developing countries, particularly in the Global South, is decoupled from industrialisation (Watson 2009). According to Watson (2009), the severity of the growing concentration of poor people in cities in the Global South reflects the weakness of local governments, whose fragmented civil societies are unable to cope with rapid change. This theory has been corroborated by Maile (2001) and Turner et al. (2001), who link the rapid expansion of the population in urban areas within Lesotho to the emergence of urban poverty.

In terms of food insecurity, Maggio, Criekinge and Malingreau (2015), along with Barrett (2010), have argued that this emerging and sometimes invisible crisis in growing cities is directly associated with poverty, rather than with environmental or other challenges. As Battersby (2012) explains, rapid urbanisation often leads to the sudden transformation of the local food system and changes how urban populations attain food security. In particular, the trend of rural–urban migration in the Global South places increased strain on urban food security systems (Parra, Dinsmore, Fassina & Keizer 2015). According to Turner et al. (2001), the rapid urbanisation in Lesotho resulted in the commercialisation of farmlands, provisions for which were made in the 1979 Land Act. Rapid and unplanned urbanisation in Lesotho is, therefore, a key driver of growing food insecurity in the country's city and towns. Moreover, despite the ubiquity of all major South African supermarket outlets in the Maseru urban area, at least 60–70% of households lack the means necessary to purchase adequate quantities of good quality food (Leduka et al. 2015). In this case, the aspect of affordability and access to

food becomes most critical, as opposed to that of food availability, which traditional food security efforts tend to focus on.

Lerner and Eakin (2011) suggest that the rising rates of urbanisation globally, and in developing countries especially, pose two main problems for food production and provision: first, the loss of food producers and, second, the loss of productive land neighbouring population centres. The situation in Lesotho confirms this view, with the mass migration of Basotho to urban areas and to South Africa, leaving only a few labourers available to participate in productive agricultural activities in rural areas (Taylor 2015). In addition, the expansion of urban and peri-urban areas in Lesotho throughout the 20th and 21st centuries has significantly reduced the amount of land available for growing crops (Woodfine 2013). Land that was initially used for agricultural purposes around cities has been rapidly replaced by infrastructure and other developments, further impacting on agricultural production in the country.

As the arguments above suggest, persistent food insecurity in Lesotho is closely associated with the challenge of chronic poverty. Turner (2009) confirms that Lesotho's food insecurity stems from its structural poverty, which is a result of a number of complex and interrelated structural as well as ecological factors. Despite Lesotho's recently becoming a lower-middle-income country, the prevalence of poverty and inequality in the country remain extremely high (United Nations 2015). In the 2014 Lesotho Vulnerability Assessment Report, the proportion of Basotho people living below the poverty line was estimated at 57.1% (LVAC 2016). This high prevalence of poverty in the country is widely associated with unemployment, which sits at 33% among young people (UNICEF 2017), as well as with the extreme degradation of the natural resources that the country's poor rural population depends on for their livelihood (IFAD 2013). A substantial portion of poor households has no access to agricultural land, while many households that do have access lack the necessary agricultural inputs (WFP 2012).

The persistent food crisis in the country is equally associated with the impact of HIV/AIDS. With a prevalence of 23.6% among adults (15–49 years) in 2018, Lesotho has the second highest rate of HIV/AIDS in the world, after Swaziland. Since the first recorded HIV/AIDS case in 1985, ever-escalating statistics have confirmed the uncontained spread of the virus and its devastating impact on every aspect of Basotho life (Drimie 2002). According to the FAO (2010), the high HIV/AIDS prevalence in Lesotho has contributed significantly to the reduction of national life expectancy to 49 years and to the increase in the number of orphans. Hawkins and Hussein (2002) note that the burden of ill-health and death due to HIV/AIDS generally

impacts on livelihoods and productivity by depleting human capital, disrupting social-support networks, and undermining institutions and formal and informal organisations. Specifically, the infection is often concentrated in age groups that supply the workforce needed for labour-intensive agricultural systems: agricultural productivity and efficiency levels become increasingly constrained due to high absenteeism and mortality (Hawkins & Hussein 2002). Conversely, Hawkins and Hussein (2002) argued that with the reduced availability of labour comes reduced earnings in households, which restricts spending on food along with the production of food, particularly in poor households. In general, illness among economically productive adults increases the burden of providing adequate nutrition to vulnerable groups within households (Hawkins & Hussein 2002). At the national level, moreover, the Lesotho Disaster Management Authority (2008) reported that Lesotho's capacity to finance its reliance on food imports had been greatly compromised owing to the significant proportion of finances that had been allocated to mitigating the impact of HIV/AIDS.

The existence of these interlinked, issues results in a complex food security challenge in Lesotho, which persist, despite the continued government focus on agricultural activities. The high prevalence of food insecurity in the country has attracted a wide range of research on the subject (see Abbot 2002; Brokken 1986; Crush & Frayne 2011; Fobo 2009; Gadaga, Ntsike & Ntuli 2014; Khaola, Potiane & Mokhethi 2014; Khoabane & Black 2009; Kopij 2007; Leduka et al. 2015; Mahgoub et al. 2007; Makenete et al. 1997; McCordic et al. 2018; Mokotjo & Kalusopa 2010; Molapo 2009; Nkhabutlane, du Rand & De Kock 2014; Romero-Daza et al 2009; Sebotsa & Lues 2011; Seeiso & McCrindle 2009; Silici, Ndabe, Friedrich & Kassam 2011; Stevens & Ntai 2011; Tsepa 2008; Turner 2009). A large number of studies focus on national-level issues of food security—such as food production, food markets, food crisis and aid, food labelling, food security strategies, formal and informal food systems, and food inflation—with only a few making a distinction between rural and urban food insecurity, and none studying both explicitly. Some studies, however, focus either on urban food security or on rural food security.

Traditionally, food insecurity in Lesotho was seen primarily as a rural problem that could be addressed through increased agricultural production (Crush & Frayne 2010; Leduka et al. 2015; Turner 2009). Consequently, the proposed solutions for this challenge have focused on smallholder farmers and rural development. Conversely, there is a new body of literature that views urban food insecurity as an emerging development concern of the current century (Crush

& Frayne 2010, 2011; Crush, Frayne & Mclachlan 2011; Frayne et al. 2014; Frayne, Pendleton, Crush, Acquah, & Battersby-lennard 2010; Heinrich Böll Stiftung 2011; Leduka et al. 2015; Watson 2009). Nonetheless, at the national level at least, the rural and agricultural orientation of food security interventions and planning remains in place, especially where government and donors are concerned (Crush & Frayne 2010). Specifically, the Ministry of Agriculture and Food Security, with the support from FAO Lesotho, the Department for International Development (DFID) and other donors, continues to approach food security through improvements in rural agricultural production.

The ongoing inability of the agricultural sector to address food insecurity in Lesotho has, however, resulted in debates concerning its capacity to address the country's food security challenge. Turner (2009) argues that the prospects of food security in Lesotho are more promising outside the agricultural sector than they are in it and that Basotho people should pursue food security primarily or entirely outside the sector. McCordic et al. (2018) reaffirm these claims, emphasising that the challenge of a sustainable local food system may not be a viable option for Lesotho, given the unfavourable geological conditions, climate constraints and poor economic returns that prevail in the country. They share the view that food provisioning should increasingly come from outside the domain of agriculture and that it should be purchased with income derived from off-farm sources (McCordic et al. 2018; Turner 2009).

The frequently contrasted ability of agriculture to address food insecurity in Lesotho may also have to do with the firmly entrenched view of food insecurity as a rural problem. As a result of this view, existing food security interventions and planning make no reference to the distinction between rural and urban areas (Crush & Frayne 2010). Typically, rural and urban spaces are conceptualised in dichotomous terms, on the assumption that there exists a clear distinction between "rural" and "urban" land uses and livelihoods (Lerner & Eakin 2011). Such heterogeneity evident in McCordic et al. (2018) suggests the presence of contextually defined vulnerabilities to food security in rural versus urban households. Several scholars (Crush & Frayne 2010, 2011; Leduka et al. 2015; McCordic et al. 2018) have argued that Lesotho's view of food insecurity as a rural challenge ignores the fact that food insecurity is a growing urban challenge. According to Frayne et al. (2014), the confluence of urbanisation and poverty creates a sequence of undesirable results that include high levels of food and nutrition insecurity. Owing to the high concentration of these forces in urban places, it is improbable that SDG 2 will be achieved in the absence of proper policy considerations being made for cities (Parra et

al. 2015). The argument is therefore that urban food insecurity must be acknowledged and captured by the existing frameworks of food security policy, just as rural food insecurity has been.

Despite the emerging scholarly distinction between urban and rural food insecurity, and the strategies for intervention that have been proposed in this regard, little has been done to explicitly analyse and compare urban and rural food insecurity in Lesotho. Confronting food insecurity in rural and urban regions requires a better understanding of the processes that shape food production and consumption patterns for the people who reside in these regions. A report by the OECD et al. (2016) uses evidence from five case-study countries—Cambodia, Colombia, Côte d'Ivoire, Morocco and Peru—to argue that the distribution and the level of household food insecurity vary significantly across geographical locations. The report also highlights that these geographical variabilities are often ignored by the production-oriented approach of many countries.

The present study seeks to derive an in-depth understanding of the similarities and differences between the realities of food insecurity in rural and urban regions in Maseru, Lesotho. It will further interrogate whether, beyond geography, any meaningful differences exist between the dimensions of rural versus urban food insecurity. Relatedly, it asks whether, given the increasing diversity of spaces in which food-related activities, urban systems, cultures and livelihoods coexist, segmenting the landscape into urban and rural spaces upholds a dichotomy that is increasingly obsolete (Lerner & Eakin 2011).

1.3 Research problem

Food security interventions are largely based on data from quantitative surveys and measurements. These data have informed the current conceptualisation of food insecurity, which sees rural food insecurity as a deficit of agricultural production (or "availability", in the food security definition) and, when it is acknowledged, urban food insecurity as a problem of consumption (or "access"). However, these quantitative measures provide little insight into the lived experiences of the food insecure or into whether these differ based on geographic location.

1.4 Objectives of the study

The main objective of this study is to explore the multiple meanings of food security based on the lived experiences of rural and urban households in Maseru. This is achieved through the following sub-objectives:

- To investigate how poor households manage food access, availability and utilisation in rural and urban areas, despite the constraints they face.
- To investigate the perceptions held by the poor of these technical terms in real, everyday life.
- To provide a description of the foodways that exist among rural and urban households.

1.5 Assumptions, limitations and delimitations of the study

- Some participants are likely to present themselves in a different or better way than their usual experiences. However, the study assumes that the behaviour observed during fieldwork is the actual or true day-to-day experience of the households in question.
- Assuming that food is more accessible to families at month-end, when finances are more available than they are mid-month, the fact that data was collected at varying points within the month could result in the study drawing misleading conclusions.
- Ethnographic research requires a huge investment of time. In this study, the time spent with each family was limited; as a result, some key characteristics of the problem may be left unexplored.
- The voices and experiences of the four participating women and their household members are not representative of rural and urban households in Maseru. An extensive literature review, encompassing both qualitative and quantitative approaches to food security, was conducted to support the findings of this study.
- All interviews were conducted in the participants' native language, Sesotho, to allow participants to express themselves fully and comfortably. Translation posed some difficulties, in cases where accurate lexical matches for certain Sesotho words could not be found in English. To some degree, this difficulty could be associated with the fact that English is the researcher's second language. To compensate for any linguistic oversights, the final paper was written with close supervisory support and with the commissioning of a language editor.

1.6 Ethics

Considering the sensitivity required in entering into people's lives to study their food habits, questions of ethics formed an important and ongoing consideration throughout the process of this research. It was important to ensure that participants contributed to the research willingly and knew they could withdraw at any time. I went to significant lengths to obtain ethics clearance from Stellenbosch University, which proved onerous and delayed my research by a year. Ethics approval was obtained from the Research Ethics Committee-Humanities, Stellenbosch University for project number 7036 from August 2018 to August 2019.

1.7 Justification for and significance of the study

A rural and agricultural orientation continues to characterise food security interventions and planning on the part of government and most donors in Lesotho. Consequently, in Lesotho, like in many Southern African countries (Battersby 2012), urban food insecurity remains largely invisible and disregarded by policy. Nonetheless, persistent food insecurity and all forms of malnutrition are pressing concerns in both urban and rural areas. Battersby (2012) suggested that although the extent of food insecurity in these regions may be similar, the drivers and consequences of this insecurity vary. Evidence from the OECD et al. (2016) confirms not only that food security varies by region but also that the nature and magnitude of food security problems vary across urban and rural regions. This study, therefore, contributes to the existing literature by deepening understanding of the diverse drivers between urban and rural household food security, with a focus on several households in Maseru, Lesotho. In order for food security interventions to be fully effective, these differences need to be recognised and be incorporated in diverse policy framings and responses.

In addition, although extensive research has explored food security in Lesotho, most studies have focused on the quantitative measures of food security and nutrition. To develop successful food security interventions in the country, it is important to understand and be cognisant of the realities and needs of Basotho people living in both rural and urban areas. This study employed a mixed methods research approach, combining quantitative measures of food insecurity with an ethnographic exploration of food and foodways in households in Maseru. Establishing whether food insecurity in Maseru varies across geographical locations can inform both action and further research aimed at improving food security in the country. No study has employed such an approach before, which speaks to the present study's importance.

1.8 Outline and summary of the study

Chapter 1 opens the study with the background on the concept of food security and the evolution of the concept over time, followed by the status of food security in Lesotho driven by the various macro-trends such as urbanisation and socio-economic aspects, along with the opportunities of food security in the country. This is followed by an outline of the research problem, research objectives and the significance of the study. The chapter concludes with the organization of the study.

Chapter 2 contains a detailed literature review to establish an understanding of and a basis for this research. It presents a review surveying the current state of global food security and highlighting both the accomplishments as well as the unsustainability of the globalised food system. This was followed by a review that concentrated on the food system and indicated the complexity of the food system and that of addressing food security. It further differentiated between the two types of food systems: the "traditional" food systems in rural developing communities and "modern" food systems in emerging and industrialised regions. This chapter also provides a review of foodways as a key tool to understanding the similarities or differences in the lived experiences of Basotho people in urban and rural Maseru.

Chapter 3 offers a discussion of the research paradigm, methodology and methods employed in this study. It examines the rationale for the research design and methodology selected to empirically investigate the research objectives. The study employed a mixed methods research approach in which it incorporated quantitative measures of food insecurity and ethnographic exploration of food and foodways were incorporated to provide insights into the lived experiences of the households in Maseru. The sample and the fieldwork were described.

Chapter 4 reports the main findings from the research derived from a combination of suitable and complementary quantitative as well as qualitative methods. The findings from the quantitative measures of food security offer a valuable snapshot of participating urban and rural household food insecurity status in Maseru. This is complemented by ethnographic findings of food and foodways in the households to allow for a deeper analysis into the processes entailed in what it means and how it feels to be food insecure.

Finally, Chapter 5 includes a summary of the key findings, conclusions and policy recommendations of the study. It offers a discussion of the major findings of the study by relating them to the reviewed literature. It also provides a summary of the addressed research

objectives, which is followed by the limitation of the study. The implications of the findings are also provided and recommendations for further research made. Finally, concluding remarks are reported.

Chapter 2: Literature Review

2.1 Introduction

This review is organised into three main sections. The section immediately below provides a review of the global status of food security. This section is followed by a review of global food systems, highlighting their key features and how some of these features have evolved over time. A brief review of the concept of foodways follows, explaining its value in terms of understanding the food security challenge. Finally, a summary of the entire review concludes the chapter.

2.2 Global food security

2.2.1 The state of global food security

Historically, the food security agenda has followed the common tendency to assume that food originates from farms and that food and agriculture are basically the same. Consequently, increasing food production has been, and remains, a key strategy for tackling food insecurity and the principal focus of research investment worldwide (Capone et al. 2014; Ingram 2011). Food security research concentrates either on upstream production, with the aim of strengthening the role of crop science and farming systems, or on agricultural trade liberalisation and the globalisation of the domination of downstream production by the European supermarket (Adam & Gollin 2015). According to this approach, food production and the physical availability of food remain vital to addressing hunger and achieving food security.

Following the implementation of this strategy, the existing farming and food systems succeeded in supplying large volumes of food globally. In particular, according to the Institute for Mechanical Engineers (IME, 2013), approximately 4 billion tonnes of food are produced per annum globally. Indeed, Gordon, Bignet, Crona, Henriksson and Holt (2017) posit that the global food system presently produces sufficient volume per capita to feed the world population, which was not the case in the 1960s. Even with the continued growth of the world population and sharp spikes in the prices of food and agricultural commodities (Adam & Gollin 2015), the growth in agricultural productivity presently outstrips demand pressures. Food remains abundant.

Crucially, however, growing aggregate food production coincides with the negative outcomes of food systems changes (Gordon et al. 2017; IPES-Food 2016). For example, it is estimated that about 30–50%, (or an equivalent of 1.2–2 billion tonnes) of the food produced never reaches a human stomach (Capone et al. 2014; IME 2015). This is associated with poor practices along the food chain, from production through to consumption. Also confirmed by IME (2015), the poor practices in harvesting, storage and transportation of food, along with market and consumer wastage contributes to a rise in food waste globally.

Food waste varies across countries. According to Adam and Gollin (2015), food waste in poor and developing countries consists of "post-harvest" losses, reflecting poor distribution and transportation systems, and weak midstream logistics. By contrast, food waste in rich and developed countries are mostly at the retail and consumer level, whereby food is fit for consumption but is not consumed (Capone et al. 2014). Indeed, the amount of food produced globally exceeds what is necessary for the global population to attain a healthy, productive and active life (Badgley, Perfecto, Chappell & Samulon 2007).

2.2.2 Undernutrition, overconsumption and micronutrient deficiencies

While existing production-oriented interventions have succeeded in providing sufficient food availability, this approach places little attention to other dimensions of food security. Specifically, the overall and per capita volume of food has increased at the cost of reducing the nutritional content of food, with a variable impact on food safety (Gordon et al. 2017). The reduced nutritional value of food contributes to deficiencies in the nutrients and or energy required for fulfilling human health (Gordon et al. 2017). These deficiencies (of both macro- and micronutrients) are reflected in some forms of malnutrition.

According to the FAO (2017), malnutrition ranges from severe undernutrition to obesity and includes all the food-related non-communicable diseases (NCDs) and incidences of hidden hunger that affect the population, throughout the lifecycle, as a result of micronutrient deficiencies. The coexistence of undernutrition, overconsumption and micronutrient deficiencies in the same communities illustrates the complexities around achieving food insecurity. Today, the prevalence of obesity and associated morbidity has become an important consideration when thinking through the current state of food and nutrition security, raising questions about the potential of public policy to alter consumption choices (Adam & Gollin 2015).

In focusing on the agricultural industry and temporary relief interventions, then, the production-oriented approach produces only modest results towards global food security (OECD et al. 2016). After a prolonged decline in hunger, which in turn almost halved undernutrition (Gordon et al. 2017), global hunger and undernourishment levels are on the rise again (FAO, IFAD, UNICEF, WFP & WHO 2017). Rising food production did not meet the targets set by the WFS in 1996 for the reduction of hunger (Clover 2003). According to figures provided by the FAO et al (2017), the undernourished global population increased in size from an estimated 777 million people in 2015 to 815 million people in 2016. At the same time, changes in the food system have contributed to the emergence of obesity and diseases of overconsumption, which are relatively recent phenomena (Adam & Gollin 2015).

Globally, the number of obese and overweight individuals combined has more than doubled in recent decades (WHO 2014), rising from 921 million in 1980 to 2.1 billion in 2013 (Ng, Fleming, Robinson, Thomson & Graetz et al. 2014). Among adults, this translates into an increase of 27.5% (Ng et al. 2014): 15% for women and 11% for men aged 18 and older (WHO 2014). Similarly, between 1980 and 2013, the prevalence of overweight and obesity among children increased by 47.1% (Ng et al. 2014), resulting in approximately 42 million overweight children worldwide (WHO 2014).

2.2.3 The role of big corporations and supermarkets in food retail

According to Ng et al. (2014), the rise in obesity over the past three decades is associated with a range of potential contributors. These include increases in calorie intake, changes in the composition of diets, declining levels of physical activity (associated with increasingly sedentary lifestyles) and changes in the gut microbiome. The recent growth of the agri-food sector (see IPES-Food 2017) and the rapid proliferation of supermarkets and convenience stores worldwide have been the key factors invoked to explain the growing consumption of highly processed food that is high in fats and sugar (Gordon et al. 2017). Cohen and Garrett (2010) explain that this growth in the agri-food sector, particularly in urban areas, provides consumers with diversified diets, which, although positive in certain respects, contain more saturated fats, sugar and salt and less fibre (Cohen and Garrett 2010), which exacerbates imbalances in food energy intake and energy use and thus heightens the risk of chronic diseases (FAO et al. 2017).

At the same time, the increasing incidence of mergers and acquisitions (M&As) and other forms of consolidation across the food industry has a significant impact on consumer food choices and production practices (IPES-Food 2017). Dominant firms decide on what to produce and determine food options, prices, promotions and the terms of customer education (Gordon et al. 2017). Moreover, the agri-food industry has shifted towards industrial farming, focusing on energy-rich, nutrient-poor staple crop varieties, while pulses and other minor crops with high nutritional value continue to be overlooked (IPES-Food 2016). As Gordon et al. (2017) show, current food production provides insufficient nutrients to fulfil human health requirements. These changes in farming and food systems have resulted in increases in nutrient-poor diets and calorie intake, which contribute to weight gain and obesity on the one hand, and micronutrient deficiencies on the other.

In addition, the growing use of antibiotics—particularly the use of antimicrobials in industrial animal production, which produces antimicrobial-resistant strains of human pathogens—is believed to alter gut microbiota in ways that contribute to obesity and malnutrition (Gordon et al. 2017; IPES-Food 2016). Moreover, inadequate and declining physical activity as a result of more sedentary lifestyles further contribute to weight gain and obesity (FAO et al. 2017). Although the health effects of overweight and obesity remain highly debated (Ng et al. 2014), studies have consistently demonstrated that the rising prevalence of overweight and obesity worldwide increases the risk of diet-related NCDs, such as osteoarthritis, cardiovascular diseases, cancer, diabetes and chronic kidney disease (Adam & Gollin 2015; Ng et al. 2014; WHO 2014).

The global food system's growing capacity to supply large volumes of food also coincides with a reduction in the resilience of the biosphere. Characterised by nine "planetary boundaries", the biosphere sets fundamental limits on human activities (Gordon et al. 2017). These boundaries are climate change, land-system change, global freshwater use, biogeochemical flows (nitrogen and phosphorous cycles), biosphere integrity, ocean acidification, stratospheric ozone depletion, atmospheric aerosol loading, and the introduction of novel entities (Rockström, Steffen, Noone, Persson & Chapin 2009).

Despite undergoing many periods of significant change, over the past 10,000 years, the planet's environment has been relatively stable (Rockström et al. 2009). This period of environmental stability is known as the Holocene (Rockström et al. 2009). According to the Gaia hypothesis advanced by James Lovelock and Lyn Margulis in the 1960s and 1970s (Blewitt 2008), the

Earth's ecosystem is a self-sustaining entity that self-regulates and reproduces to attain balance and ensure the continued emergence and existence of life in its various forms (Anker 2005). As a living organism, then, Earth forms a vast yet complete system that coevolves with environmental changes in order to sustain life.

However, since the advent of the Industrial Revolution, a new era, which has been labeled the "Anthropocene" has taken root (Rockström et al. 2009), which posits that the human species has increasingly held dominion over the earth's resources, including its vegetation and animals to the extent that it has collectively become a geological force. In contrast to the early view of humans as an insignificant fauna species (see Harari 2011), humans in the early Anthropocene period became more prominent than other species. As a result, the non-human world was primarily valued in terms of its instrumental value or its usefulness to humans (see Hattingh 1999). The historical human practice of subsistence through gathering plants and hunting small creatures changed to the regular hunting of large game, which catapulted humankind from the middle to the top of the food chain (Harari 2011). This trend was also linked to the domestication of fire, mostly associated with the advent of cooking, which enabled humans to eat more kinds of food within shorter periods of time. In addition, Harari (2011) asserts that fire became an everyday source of light and warmth as well as a deadly weapon against other animals and the general environment.

The interaction between humans and their environments has since changed, resulting in both incremental and fundamental shifts in the arrangement, functioning and purpose of the non-human world (Stokols, Misra, Runnerstrom & Hipp 2009), the food system included. According to the classic conceptualisation of ecological economics, which views the economy as embedded within society, which is in turn embedded within the biosphere (see Daly 1996 in Gordon et al. 2017), changes in food system activities have been responsible for changes in the Earth system, affecting the "safe operating space for humanity" (Rockström et al. 2009). As several studies have confirmed (see Campbell et al. 2017; Gordon et al. 2017), agriculture remains a major and significant driver of many of the planetary boundaries, five of which are either approaching risk or already in the high-risk zone. This problem is specifically linked to the outcomes of current food systems, which are characterised by "industrial modes of agriculture" (IPES-Food 2016). From a natural resource perspective, United Nations Environment Programme [UNEP] 2016) claims that many of the existing food systems have proved unsustainable. The organisation further stipulates that expected population growth, the

ongoing expansion of cities, and dietary shifts to unhealthy and unsustainable consumption will only increase current pressures on the Earth system (UNEP 2016).

The compromised biosphere is only one of multiple decisive factors surrounding food security. Conditions of conflict, often compounded by droughts and floods, are also major contributors to household and national food insecurity (FAO 2017). Clover (2003) asserts that civil war and political upheaval have been the primary contributing factors in countries that have suffered famine in the past 20 years. Famine was declared recently in South Sudan, for example, while a high risk of famine-like conditions was declared in Somalia, Yemen and northeast Nigeria (FAO et al. 2017). All these countries are characterised by conditions of conflict and violence whose multiple, compounding impacts flow through a variety of channels to undermine the resilience of future livelihoods and food security.

As already mentioned, in many regions, countries and even households forms of undernutrition, overweight and obesity, and their associated NCDs and micronutrient diseases now coexist (FAO et al. 2017, 2019). This phenomenon is known as the "multiple burden of malnutrition" (FAO et al. 2019). It is accompanied by a range of other negative outcomes of agricultural production (IPES-Food 2016), which collectively have an impact on food systems (Clover 2003), and it remains a pressing challenge worldwide (FAO et al. 2017; Gordon et al. 2017). Evidently, food security is a complex sustainable development issue. Achieving a world without hunger and any form of malnutrition requires commitment to a solution that sees beyond the misconception that producing more food will fix global food insecurity.

2.3 Food systems

The food system, like many socioeconomic systems, depends on an array of resources to foster social development and human wellbeing. These include the various ecosystem services, biodiversity, land, water, genetic resources and marine resources (UNEP 2016). The food system is usually conceived of as a set of activities related to food, from production through to consumption (Ericksen 2008; Lang & Barling 2012). Figure 2 below summarises these activities, which include food production, food processing, food packaging and distribution, and food retailing and consumption. Although the principal outcome of a food system is to provide food security outcomes (Ericksen 2008), it also gives rise to other socioeconomic and environmental issues and conditions (Ingram 2011).

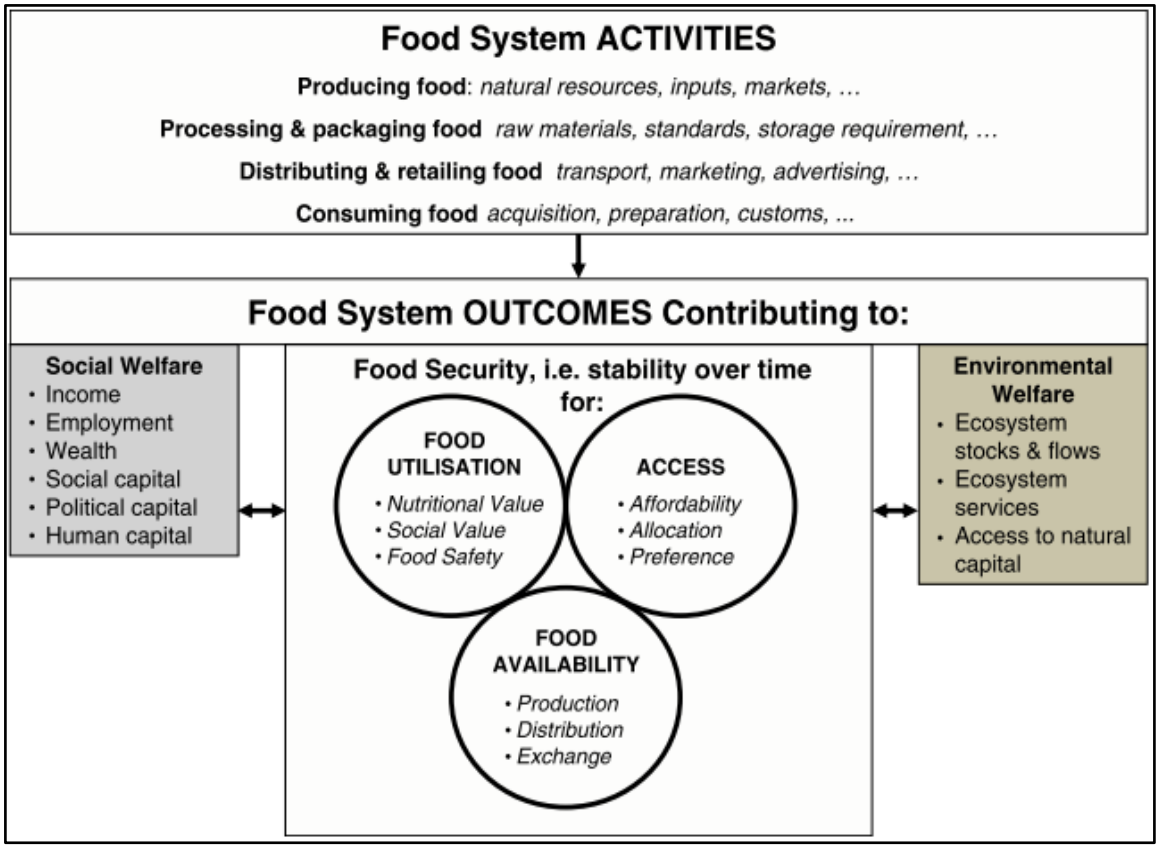

Figure 2: Conceptual model of food systems showing activities and outcomes (Ingram 2011)

Figure 2 also captures the complexities around addressing food security. It shows that food security is influenced not only by food system activities but also by a host of other societal, environmental, political and economic factors. According to Ericksen (2008), the interaction among these factors, food system activities and food system outcomes, is complex and feeds back into the food system, as well as into other systems to which the food system is connected. Globally, this complex interaction fluctuates from place to place, resulting in varied food systems. These range from "modern" food systems, in emerging and industrialised regions, to "traditional" food systems, in rural and developing countries, as the UNEP (2016) reports. Table 1 below provides an overview of the key features of the two systems.

Table 1: The key features of "modern" and "traditional" food systems

Food system feature	"Modern" food systems	"Traditional" food systems
Employment sector	Food processing, packaging and retail	Food production
Supply chain	Long with many food miles and nodes	Short and local

Food production system	Few crops predominate; intensive, high inputs	Diverse, varied productivity
Typical farm	Industrial, large	Family-based, small to moderate
Typical food consumed	Processed food with a brand name; more animal products	Basic staples
Purchased food bought from	Large supermarket chain	Small, local shop or market
Nutritional concern	Chronic dietary diseases	Under-nutrition
Source of national food shocks	International price and trade problems	Poor rains; production shocks
Source of household food shocks	Income shocks leading to food poverty	Poor rains; production shocks
Major environmental concerns	Nutrient loading, chemical runoff, water demand, greenhouse gas emissions	Soil degradation, land clearing
Influential scale	National to global	Local to national

Source: Adapted from Ericksen (2008) and Maxwell and Slater (2003)

Decades ago, according to Adam and Gollin (2015), the global food system was dominated by traditional food systems. Today, however, traditional food systems are being rapidly replaced by industrialised food systems, with "pure" agriculture accounting for only a small portion of food in developed countries (Adam & Gollin 2015). Food systems are now globalised, interconnected socio-ecological systems. UNEP (2016) stipulates that this new status quo has been driven by macro-trends such as urbanisation, increased wealth and other socioeconomic and demographic developments that have occurred as part of the Great Acceleration (since the 1950s to the present). To meet the increasing global demand for food as a result of rising populations and changing diets, the food system has changed and become increasingly shaped around industrial modes of agriculture.

This change has increased the efficiency and productivity of food systems and resulted in worldwide successes in improving nutrition and reducing the prevalence of hunger (Ericksen 2008). However, as discussed, these developments are followed by serious concerns relating to some features of food systems that threaten the accomplishment of varying economic, social and environmental goals and, as a result, undermine food security (Ericksen 2008). According to IPES-Food (2016), the uniformity at the heart of industrial food systems—and their reliance on chemical fertilisers, pesticides and the preventive use of antibiotics—leads systematically to negative outcomes and vulnerabilities (IPES-Food 2016). These outcomes include the

deteriorating socioeconomic status of small-scale farmers, the exposure of economies to price shocks and "commodity-induced poverty traps", the worsening of the multiple burden of malnutrition, rising health risks, and a reduction in the resilience of the biosphere (IPES-Food 2016).

Today, one of the most dominant aspects of food system change involves trade and consolidation. IPES-Food (2016) reported a continued increase in the share of food trade in recent decades, from 5% in 1986 to 23% in 2009. At the same time, international food trade has taken on political importance. The supply chains of foodstuffs have become more export-oriented and export-dependent (IPES-Food 2016). Most importantly, though, industrial agriculture has expanded, producing substantial supplies of uniform, tradeable crops.

Whether at the national, regional or global level, the concentration of power over the food system is remarkable. For instance, as part of their growth strategies, firms in the agri-food sector pursue M&As and other forms of consolidation. According to IPES-Food (2017), mega-mergers in the industry since 2015 have taken on a new scale, sweeping through all nodes of the chain. These mergers not only produce synergies and economies of scale, increase operations and cut consumer prices; they also bring control of the industry into the hands of a few. This reinforces firms' economic and political dominance and their ability to influence the governance of the food system.

It follows that growing firms become the gears of the food system, able to control food system values to support mainly their own commercial interests. In most cases, these firms operate to reduce their own private risk, at the expense of societal and environmental sustainability. As IPES-Food (2017) argues, because of their size and power over the food system, they become "too big to fail", while at the same time becoming too big to feed humanity sustainably. In short, many of the apparent food system changes are not driven by concerns over food security or sustainability.

The informal economy[1], despite trade and consolidation, has remained a major contributor to food systems and food security. While often ignored or penalised by governments, the emerging and in many places, growing informal economy is a direct response to the needs of

[1] "The informal economy "encompasses all activities by workers and economic units that are—in law or in practice—not covered or insufficiently covered by formal arrangements" (International Labour Organization 2002).

urban life (Hitimana, Allen & Heinrigs 2011). Several studies have confirmed the significance of informality in the food security attainment habits and livelihoods of those living in low-income settlements (see Battersby, Marshak & Mngqibisa 2016; Crush & McCordic 2017; Fraser, Moonga & Wilkes 2014; International Institute for Environment and Development 2016; Skinner & Haysom 2016). Specifically, the informal food economy serves as a significant employer for the poor (Fraser, Moonga & Wilkes 2014) and a vital source of affordable and reliable food in most cities in the Global South (Crush, Frayne & McCordic 2017; Crush & McCordic 2017; Frayne et al. 2010), thus contributing to the utilisation dimension of the FAO food security definition (Skinner & Haysom 2016).

Informal economic and social networks play a significant role in facilitating the poor's access to food (Boehm 2003; Kroll 2016; Nickanor 2013; Turner 2005; Turner et al. 2001). Specifically, poor people often receive informal support from relatives, friends and neighbours, through sharing meals with other households, borrowing food from other households or buying food on credit, and by receiving food from other households in the form of gifts. According to Mofuoa (2015), sharing and interdependence amongst Basotho has always been at the core of their livelihood strategies and it was a norm for the needy to expect economic and social support from their relatives and neighbours. Like most developing countries, Turner et al. (2001) argued that much has changed in the cultural and social framework of the Lesotho society as Basotho livelihoods take on more urban characters. While the strength of these networks in urban areas is arguably lessening, many Basotho people, particularly those that live in rural areas still felt, according to Turner et al. (2001) relatively confident in the functioning of these networks in their communities.

Overall, the food system has experienced deeply intertwined economic challenges relating to trade, food markets and their volatility, supply and distribution, regulation, affordability and accessibility, and globalisation (Capone et al. 2014). Recently, the constantly changing economics and politics of food, and the growing awareness of the stresses on the global food system, have led to new challenges for the global community. While there may be regional differences in how food systems are managed, and the extent to which they impact on the various aspects of society (UNEP 2016), the cracks found in industrial food systems could be perceived as opportunities for improvement and innovation (IPES-Food 2016; UNEP 2016). According to Adam and Gollin (2015) and Sundkvist, Milestad and Jansson (2005), it is

precisely the flaws of the industrial food system and the challenges it creates that provide a new space for policy and action.

Lang and Barling (2012), however, point out that, while the global community is aware of the need to change the food system in order to make it sustainable, there is a lack of recognition of how extensive this change needs to be. As Rees (1995, in Hopwood, Mellor & Geoff 2005) has proposed, there are three broad views on the nature of the changes required for sustainable development, in terms of societal, political and economic structures as well as human–environment relationships. These include the "status quo", which acknowledges the need for adjustments but does not make any fundamental changes to the existing political and socioeconomic arrangement. "Reforms", on the other hand, recognise that large and profound shifts in policy and lifestyle will be needed to address the present imbalances and challenges. "Transformation", finally, accepts that the source of the problem is existing political and socioeconomic structures themselves and, consequently, that a radical transformation is needed to address the current challenges.

For some, addressing food systems challenges and food insecurity involves maintaining the dominant industrial food system and simply improving certain aspects of it. Nonetheless, there is evidence in the literature (see Gordon et al. 2017; IPES-Food 2016) that this approach produces short-term solutions and will not suffice for sustainable development. Rather, it is argued that only transitioning to diversified agroecological systems will provide the long-term solutions needed and more sustainable food systems overall. As highlighted by IPES-Food (2016), diversified agroecological systems have the capacity to provide a fundamentally different model of agriculture, one based on diversifying farms and farming landscapes, optimising biodiversity, reducing chemical inputs and stimulating interactions between different species, as part of a holistic strategy to build long-term fertility, healthy agro-ecosystems and secure livelihoods.

Evidently, a secure food system focuses not only on increasing food production. According to the Sustainable Development Commission (2009: 10 in Lang & Barling 2012), a secure food system is one where:

> The core goal is to feed everyone sustainably, equitably and healthily; which addresses needs for availability, affordability and accessibility; which is diverse, ecologically sound and resilient; and which builds the capabilities and skills necessary for future generations.

It is the sort of food system that is ecologically, socially and economically sustainable (Lang & Barling 2012).

Given the extent to which global agricultural production has been responsible for shifting the Earth system towards, or past, the planetary boundaries (Rockström et al. 2009), the sustainability of agriculture and the overall food system would be a significant step towards the sustainability of our planet (Campbell et al. 2017). Therefore, a secure food system is one that is sustainable, and the path to food security is through addressing sustainability. Although much emphasis has been placed on changing production practices, Capone et al. (2014) stipulate that moving towards a sustainable food system and the attainment of food security also requires moving towards sustainable consumption patterns. This involves replacing aspirations of maximum consumption with patterns of optimised consumption. This way, changes in both production and consumption practices can occur simultaneously and become mutually supportive of a sustainable food system.

2.4 Foodways

According to Mintz and Du Bois (2002:102), "next to breathing, eating is perhaps the most essential of all human activities, and one with which much of social life is entwined". The embeddedness of food and eating in other facets of society suggests that food is more than simply the material we eat for nourishment and sustenance. It is intrinsically social and performs functions that go beyond diet and nutrition (Gumerman 2012; Visser 1999). Specifically, Camp (1982) and Long (2001) assert that food constitutes a language that generates statements that express status, identity (both social identity and self-identity), shared values and other social "messages" about the world and human behaviour, in varying regions around the globe. Moreover, throughout human life, food is instrumental to the processes involved in agency building and place-making (Hendricks, Calasanti & Turner 1988; Williams-Forson 2016). In addition, owing to its vital role in our daily human activities (see Mintz & Du Bois 2002), food is an important organising principle of a nation's social and economic systems (Chavas 2017).

Williams-Forson (2016) and Gumerman (2012) suggest that food is also an important element of cultural sustainability, which involves the many rituals that contribute to reinforcing the norms that are embodied by a society. These rituals may range from technology to nutrition to symbolic aspects as well (Gumerman 2012). According to Long (2001), food-related beliefs

and behaviours are expressive of how a culture conceptualises its physical, social, and cultural universes. Food also offers a useful foundation for pursuing larger questions of cultural continuity and change, which are expressed in and exposed by both conscious and unconscious human behaviours, choices and preferences (Camp 1982). Given the entwined nature of food and culture, Visser (1999) argues, changing one's diet is equivalent to changing one's culture, and vice versa.

The concept of foodways helps us acknowledge the role of food not only in satisfying bodily appetites and gourmet preferences but also in addressing social needs (Gumerman 2012; Long 2001; Mintz & Du Bois 2002; Visser 1999). As a research model, foodways captures the full meaning of food and its significance in a society. The concept of foodways involves all the activities, rules and meanings linked to the production, harvesting, processing, cooking, serving and consumption of food in a society (Camp 1982). According to Alkon, Block, Moore, Gillis and DiNuccio (2013), foodways as a concept refers to the cultural and social practices that influence food consumption. It involves people's daily choices with regard to how and what they eat, where and how they purchase food, and what inspires their food preferences (Alkon et al. 2013; Byrd & Byrd 2017; Cannuscio, Weiss & Asch 2010). Kashay (2009) suggests that these choices are usually learned by individuals within a society, from early childhood onwards. Individuals learn which foods are proper to eat, the appropriate ways to prepare them, and the cultural beliefs attached to food.

Owing to the specific characteristics that define and differentiate regions, the processes that shape patterns of food production and consumption also vary regionally. For instance, urban households often pursue livelihoods that depend less on the natural resource base and more on urban employment and services (Cohen & Garrett 2010). As a result, they are usually more integrated into markets and rely more on supermarkets for food than households in more remote rural regions. Conversely, many rural regions are characterised by weak transport infrastructure and incomplete markets of all types (OECD et al. 2016), such that rural dwellers are typically conceived as net food producers. In rural regions, self-supply is common, with most households growing their own crops and livestock (Cohen & Garrett 2010). Few urban residents have these options. Additionally, the evolving environments and dynamics of the intertwined economic, social and ecological factors relating to food systems have major impacts on the foodways of the poor. In the same way, Kroll (2016) argued that such transitions are shaped by: "the ways

poor people access food, what kinds of food they purchase, how they are consumed, and the culturally-conditioned meanings ascribed to food and eating".

The distinct attributes of rural and urban regions imply that the factors that determine food security in each context differ. Hendricks et al. (1988) propose that a necessary condition for understanding food security is understanding how people experience it, including the meanings that food and food practices have in their lives. In other words, by looking into the pervasive and complex role of food in everyday social life (Low, Lynn & Ho 2018), we can gain insight into large-scale and diverse environmental, societal and political challenges (Mintz & Du Bois 2002). We can derive a better understanding of the similarities or differences that exist in a country's rural and urban foodways and, therefore, of the determinants of food security in each type of area. By investigating food, and the associated social meaning of food, in a given area, we can begin to enforce relevant solutions that foster sustainable food consumption and production practices.

2.5 Summary

This literature review has established the global view of food security and revealed it to be a complex sustainable development issue. The emerging challenge of the multiple burden of malnutrition, along with the other negative outcomes of industrial modes of food production, impacts on the food system and on the biosphere, and raises questions about the ability of the current food system to bring about food security. The literature maintains that the best path to food security is through addressing the sustainability of the food system. This calls for a fundamental shift in the way society consumes and produces towards more sustainable patterns—patterns that are not only economically feasible but also socially and environmentally responsive. Furthermore, understanding food beyond its role as a means of nourishment is key to addressing food insecurity in many regions.

Chapter 3: Research Paradigm, Methodology and Methods

3.1 Introduction

How research is carried out depends on the researcher's beliefs about the nature of social reality and what can be known about it (ontology), the nature of knowledge and how it can be acquired (epistemology), her own values (axiology), the language of research (rhetoric) and the methods used (methodology) (see Chilisa, 2012; Creswell, 2012). The principal orientation of the theory in relation to the research also plays a key role in the way the research approach is defined. In addition, the research method proposed is dependent or derived from the nature of the research problem to be explored (Noor, 2008). This section provides an overview of the research paradigm, methodology and methods deployed in the present study.

3.2 Research paradigm

According to Creswell (2012), good research involves an explicit acknowledgement of the philosophical assumptions, paradigms and frameworks that have guided or influenced the conduct of the study. Philosophical assumptions reflect the stance of the researcher on ontological, epistemological, axiological, rhetorical and methodological issues in the research project. Once such a stance is adopted, a set of beliefs—also known as paradigms or worldviews—guides the study's claims about knowledge (Creswell 2014) as well as the study's approaches to data collection, data analysis and writing (Creswell 2012).

This research aims to gain an understanding of the lived experience of household food insecurity in urban and rural Maseru. Its general orientation primarily follows a qualitative research approach, which is influenced by an interpretivist epistemology and a social constructivist ontological position (Bryman et al. 2014). The study also incorporated quantitative methods and data tools to cross-check and reinforce its qualitative methods, thus enhancing confidence in the qualitative research findings (Bryman et al. 2014). As outlined in Bryman et al. (2014), this approach is known as a "filling in the gaps" form of mixed methods research.

Qualitative research methods originate within various disciplines, such as sociology, anthropology and psychology (Fossey, Harvey, Mcdermott & Davidson 2002). They involve the description of social contexts and the interpretation of subjective meanings attributed to situations and actions, as well as the backing up of lay facts (Tesch 1990 in Fossey et al. 2002).

Fundamentally, qualitative research approach seeks to investigate and understand the meaning that individual people and groups assign to a social problem (Creswell 2014). In both the collection and analysis of data, emphasis is placed on words rather than quantification (Bryman et al. 2014). This method of research tends to adopt an inductive approach to the relationship between theory and research (see Bryman et al. 2014). It focuses on meaning and on the importance of rendering the complexity of the situation in order to draw generalisable inferences and generate theories or patterns of meaning (Bryman et al. 2014; Creswell 2014).

As Chilisa (2012) explains, the interpretivist paradigm is associated with Edmund Husserl's philosophy of phenomenology and Wilhelm Dilthey's philosophy of hermeneutics. Bryman et al. (2014) and Fossey et al. (2002) define phenomenological design as researching the ordinary world through the eyes of those with direct lived experience, while hermeneutic philosophy is concerned with the theory and method of interpreting human action. The phenomenological–hermeneutical perspective informs assumptions about the nature of reality, about what counts as knowledge and its sources, and about the values that guide the role of the researcher in the research process. This way of generating understanding is also known as an "emic" perspective (Long 2001; Morris, Leung, Ames & Lickel 1999; Ritchie & Lewis 2003; Wilson 1977). While the "etic" perspective generates understanding from a distant or an outsider view, "emic" perspective, in contrast, involves the pursuit of an understanding of a particular "culture" from an insider point of view (Parkin 2011).

While studies of meaning are generally thought to be enabled by qualitative research methods (see Even-Zahav 2016; Molapo 2009; Mycek 2018; Rearick 2009), the widespread use of questions about attitudes in surveys suggests that quantitative methods can also uncover issues of meanings and enrich our understanding in this area (Bryman et al. 2014). Bearing these nuances in mind, this study incorporated quantitative tools, including a range of validated metrics relating to participants' reasons for their actions, which augmented the meanings that participants associated with specific behaviours and strategies linked to household food insecurity (Fenton, Hatfield & McIntyre 2012; Marsh 1982 in Bryman et al. 2014). Despite frequently being influenced by a positivist epistemology,[2] quantitative research methods can be incorporated into interpretivist research (Bryman et al. 2014). Furthermore, features of the inductive approach entailed by positivism implies that it is possible to use quantitative methods

[2] Positivist epistemology is sometimes called the scientific method (Creswell 2014). It asserts that the natural scientific method is the only approach to study and establish truth as well as objective social reality (Bryman et al. 2014; Chilisa 2012).

to collect observations in a manner that is not overly influenced by pre-existing theories, in order to generate new theories (Bryman et al. 2014). Quantitative research methods can thus play a crucial role in a study that explores the meanings of food security through the lived experiences of rural and urban households.

A worldview that is often combined with interpretivism is social constructionism or constructivism (Creswell 2014). This is a perspective that views a social phenomenon and its meanings as continually created by social actors through both individual and collective social interactions (Bryman et al. 2014). The continual creation of a phenomenon implies that the realities of social phenomena and their meanings are multiple and vary across time and place, which leads a researcher to consider the complexity of views rather than simply narrowing meanings into a few set ideas (Creswell 2014). Researchers holding the philosophical assumptions of social constructionism seek to understand the numerous realities of a social phenomenon that have been socially constructed, through an approach that provides more depth, thus highlighting the differences between what people say they do and what they, in fact, do and experience. This way of generating understanding is often referred to as an "etic" perspective (Dietz 2011; Morris et al. 1999). Although qualitative content analysis[3] and discourse analysis[4] have played an important role in the development of the notion of social constructionism, conventional quantitative content analysis[5] is also useful for this purpose (Bryman et al. 2014).

As stipulated by Bryman et al. (2014), quantitative and qualitative methods, when adopted in a study, uncover what people do and think but investigate these topics in different ways. As such, qualitative and quantitative approaches should not be viewed as rigid or distinct dichotomies, but rather as different ends on a continuum where mixed methods research resides in the middle (Creswell 2014). The main assumption of mixed methods research, according to Creswell (2014), is that the combination of quantitative and qualitative methods draws on the relative strengths of the two approaches to achieve a more nuanced understanding of the research problem than each approach could individually yield. Furthermore,

[3] Qualitative content analysis refers to "a strategy for searching for the communicative characteristics of language through focusing on the content, underlying themes and meaning of text" (Bryman et al. 2012:354).
[4] Discourse analysis is an approach to language that emphasises the way versions of the world and of society, including events and inner psychological worlds, are produced in "discourse", a term that can also be applied to forms of communication other than talk (Bryman et al. 2012:365).
[5] Conventional quantitative content analysis refers to a research technique for the objective, systematic and quantitative description of the manifest content of communication (Berelson 1952 in Bryman et al. 2012).

incorporating both approaches into one study improves the chances of accessing the settings that might otherwise be excluded from the investigation (Bryman et al. 2014).

This research, therefore, incorporates elements of both the emic and the etic perspective into its approach, not committing fully to either. By utilising methodological triangulation,[6] the study seeks to reveal wide-ranging insights into the meanings of food security, based on the lived experiences of rural and urban Maseru households. According to Morris et al. (1999), an integrative explanatory framework that includes insights from both viewpoints avoids the limitations of purely etic and purely emic findings in conceptualising culture and in capturing its various influences on understanding. In this way, emic and etic approaches become complementary, as is further illustrated and explained in the methodology section below.

3.3 Fieldwork and data collection methods

As opposed to producing statistically representative samples, as is the case with probability samples (random selection), this study is based on non-probability samples in which the sample selection is criterion-based. Specifically, the sample in the study was chosen for convenience, or purposively sampled. As argued by Reeves, Kuper and Hodges (2008) and Fossey et al. (2002), in order to help an ethnographer gain more insights into the phenomenon, all relevant participants, settings and information sources are sampled on an opportunistic and purposive basis. In addition, since it may be difficult to access all the relevant participants, several ethnographic studies (see De Backer 2013; Kjeldsen 2018; Parkin 2011) used convenient samples available to the researcher by virtue of their accessibility. The chosen participants were selected based on research convenience, in other words. These studies embraced specific features that would also enable a detailed exploration and understanding of the central themes surrounding food security in Maseru and whether these themes vary across urban–rural households in Maseru.

Mirroring a study by Casini, Contini, Marone and Romano (2013), sampling in the present study is stratified into two stages. In the first stage, the Maseru district is divided into rural and urban regions based on the country's classification of rural and urban areas. In the second stage, poor, food-insecure households are sampled from both urban and rural regions.

[6] Methodological triangulation refers to "a technique designed to compare and contrast different types of methods to help provide more comprehensive insights into the phenomenon under study" (Reeves et al. 2008: 514).

The fieldwork for this research took place in the communities of Ha Khoeli (Maseru rural) and Lithoteng (Maseru urban) between August and September 2018. Each of these communities has distinct characteristics that influence the processes that shape patterns of food production and consumption for the people who reside in them, and hence the food security situation of the sampled households. These characteristics include diverse geophysical, natural and human-made realities, which ultimately foster different local food environments. In this study, a sample of four households (that is, n=4, where n is the sample size) were chosen for convenience, or purposively sampled, to allow for a rich and in-depth analysis of Basotho food experiences across and within these geographic differences. The four households (two from urban areas and two from rural regions) were all of low socioeconomic status. By sampling matched samples of households in distinct locations, the study sought to uncover territorial variations in the dimensions of food insecurity experiences among Basotho people. Owing to the small size, none of these differences is statistically significant.

Research was conducted with each household for a minimum of three days each, which was deemed to be sufficient time for obtaining a reasonably comprehensive grasp of the household's foodways, as informed by the original interview schedule. The fieldwork commenced with an ethnographic data collection in urban households. This was followed by both the ethnographic data and quantitative data collection in rural households. At the end of the data collection phase in rural households, revisits to urban households were made for the purpose of conducting quantitative interviews. Both the interview guides and quantitative questionnaires were tested on a pilot sample of two other individuals who were not part of the study. These were close friends and family living in Maseru who had an idea of what my research was about. I used the feedback from this test to improve my tools and questionnaires prior to my visits to the participating households.

The three key data collection methods used in the study were in-depth, face-to-face semi-structured interviews; participant observation; and robust household surveys. The study made use of a convergent parallel mixed methods design, in which quantitative and qualitative data are collected at roughly the same time and the information converges in the interpretation of the overall results (Creswell 2014). The following sections describe each tool used in the data collection process.

3.3.1 In-depth, face-to-face semi-structured interviews

The data in the study were collected through semi-structured in-depth interviews conducted in Sesotho (the participants' first language) in all the four participating households. The questionnaire guide for the interviews consisted mainly of specific open-ended questions relating to the household's food experiences, beliefs and practices and to themes that indicate the presence of household food insecurity.

According to Mason (1998 in Morris 2015a), a semi-structured in-depth interview can be equated to a relaxed, open and honest conversation between two or more individuals who are discussing a topic of mutual interest. Whitehead (2005) calls it "the natural conversational ethnographic interview". This format allows the researcher to engage in a conversation that allows for the different topics of the research to be covered, leaving space for the researcher to probe or seek clarity, where needed (Bryman et al. 2014; Morris 2015a; Reeves et al. 2008). The probing aspect of the in-depth interview became an effective tool in this study, encouraging participants to reflect on their feelings (see Brown, Edwards & Hartwell 2010) and thus giving me access to their thoughts, motives, experiences, memories, understandings, interpretations and perceptions of food security (see Morris 2015a).

In addition, owing to the nature of the study, which entailed some sensitive questions that participants might have been hesitant to discuss in a group setting, the face-to-face interview approach was advantageous: it allowed the participants to talk about their opinions and personal feelings openly and describe their food security experiences freely (see Bryman et al. 2014). Although the participants in the study were all women, in at least three of these households most of the interview time was spent in the company of one or more other family members or friends, male and female. In one of the households, children were constantly present, but no research questions were directed towards the children, as per the study's ethics principles (Bryman et al. 2014; Morris 2015b). Ethics approval was obtained from the Research Ethics Committee-Humanities, Stellenbosch University for project number 7036 from August 2018 to August 2019.

The interview data consist mostly of written field notes and audio recordings, in situations where audio recording was possible (and subject to participants' permission). The interviews were transcribed and translated into English. The written field notes used in this thesis may be grouped into two types: jotted notes (on-site at time of fieldwork) and journaling (Bryman et

al. 2014). For all the four households, an interview guide was printed out and served as a reference for our discussions. At the same time, the guides were used to take note of participants' responses under each theme and, in cases where the space in the guide did not allow for this, each guide had an attachment of two to five sheets of plain paper, also known as general ethnographic recording sheets (Whitehead 2005), on which I wrote some notes.

The jotted notes were brief and only specified the key dimensions of the responses provided. In this way, I made sure that I avoided disrupting the flow of the conversation and only took small amounts of time out of the conversation (Bryman et al. 2014). Nonetheless, the jotted notes were vivid and clear enough to allow for elaboration later in the day, also known as journalling (Bryman et al. 2014). The forms of journaling that were used for this study may be categorised into: mental notes and full field notes. Due to the nature of the study, some interviews were conducted concurrently with participation in an activity and it was difficult to take notes. In such cases, sharp mental notes became crucial for documenting participants' responses (Bryman et al. 2014). Full field notes, by contrast, involved expanding on the jotted notes as well as writing down the details of whatever I heard and was discussed during the interviews (Bryman et al. 2014; Mack, Woodsong, MacQueen, Guest & Namey 2011). At the end of each day, I wrote up the full field notes in a research journal, which I kept for the duration of the fieldwork.

Moreover, where permission for audio recording was given and recording was possible, in-depth interviews were audio-recorded using my smartphone (Alkon et al. 2013; Davis 2017; Noble 2010; Rearick 2009; Wills, Meah, Dickinson & Short 2013). This method enabled the full details of longer conversations and food stories to be captured, without interviews being impaired by note-taking. Audio recording proven to be a very effective tool in capturing food stories in urban Maseru, as opposed to rural Maseru, where a lack of power made it difficult to keep my phone charged during all visits. This led to some interviews being recorded and detailed transcribing being done in other cases, where recording was not possible. All the audio recordings were later translated and transcribed for analysis.

3.3.2 Participant observation

As discussed earlier in this chapter, the primary qualitative approach drew on a variety of ethnographic research techniques, such as participant observation, extended interviews and reflexive journalling (Garthwaite, Collins & Bambra 2015). Ethnographic research is a field-

based inductive research method in which the researcher assumes the dual role of being both a participant in and an observer of the lived experience of the group or persons of interest. For classical ethnographers, this involves deep immersion in a social setting for an extended period of time, spanning months to years (Bryman et al. 2014; Morris et al. 1999). In this way, the researcher becomes familiar with the natural research setting and can examine the sociocultural processes, their dynamics and how these dynamics change over time. Ethnography requires a researcher to have direct personal contact with sociocultural activities, observing and describing people's behaviour, their language, culture, values, attached meanings and social organisation in everyday life. According to Bryman et al. (2014), in ethnography, the researcher watches and listens to what people say and do, engages people in conversations to enquire about specific issues of interest, takes detailed notes and returns home to extensively write up the findings.

While spending considerable time in a social setting remains relevant to the ethnographic method, there are cases where "full" immersion is untenable. These cases include undergraduate or master's research projects, where finite time and money are allocated to the research (Bryman et al. 2014). Therefore, in contrast to classical ethnographic research, some projects have focused on specific groups, sites or institutions for a relatively short period of time, from a couple of weeks to a few months (see Beach & Finders 1999). Such research projects are generally referred to as micro-ethnographic studies (Wolcott 1995). Accordingly, this study adopted a micro-ethnographic method, with the ethnographic aspect of the study of foodways engendering a better understanding of the traditions and practices surrounding the food Basotho people in rural and urban Maseru eat, as well as where it comes from, why they eat it, and what their food practices convey.

One of the key limitations of both in-depth interviews and surveys is the ability of the interviewee to construct a world, the reality of which is usually hard to verify (Morris 2015a). To overcome this limitation, the study implemented participant observation as a method for verifying and reflecting on the social reality of the participants under consideration (Mack et al. 2011). Several food studies in the reviewed literature have implemented the participation observation method (see Hawk 2013; Mack et al. 2011; Tsepa 2008; Wills et al. 2013). My role in this study became that of a participant in, as well as an observer of, food-related activities and other family chores that needed to be done. The degree of each role varied depending on the specific household context and the activities that occurred during the visits.

Through participant observation, it was possible for the study to develop an insider's view not only of the food engagements of the participating households, but also of how it feels to be part of the participating households (Wills et al. 2013). This method helped articulate details of some of the households' practices and habits that would have been difficult to convey through words alone. During participation, in most cases, I had both my hands engaged, and limited opportunities to stop and take notes of what I observed on-site. In order to not disrupt our conversations and the work at hand, I opted, as mentioned, to taking sharp mental notes of any item that I had identified with my research questions and, later in the day, I documented the details of my observations in my research journal. These full notes consisted of my observations, thoughts, reflections and interpretations of the households' settings, as well as the emotions I had captured during the conversations and in any other food-related interactions (Davis 2017; Fossey et al. 2002).

Furthermore, I used digital photography to complement the participant observation data (Reeves et al. 2008; Tsepa 2008; Wills et al. 2013). With participants' consent, pictures were taken in and outside their homes and at neighbouring sites. The study used photography as a source of data based on the realist traditional approach, wherein photographs capture some of the events and observations on-site, which then become facts to be analysed along with other types of data (Bryman et al. 2014). This photographic data enabled me to capture details that could not be conveyed in interviews or through tools that rely on language (Wills et al. 2013).

3.3.3 Robust household survey

A survey design was used in this study, with data collected by means of a questionnaire covering the various food security measures. According to Creswell (2014), this approach aims to provide numeric insights on the attitudes or thoughts of the population under study as well as the emerging trends relating to the population. Therefore, the data emerging from the measurements used in this study indicate various aspects of household food security and, as such, are key to identifying any variations between the lived food security experiences of urban versus rural households, along with any possible associations between the various aspects of food security (Bryman et al. 2014).

Despite an improved theoretical understanding of food insecurity (see Barrett 2010; Headey & Ecker 2012; Lang & Barling 2012; Pinstrup-Andersen 2009; Ramp 2014; Simon 2012; Upton et al. 2016), there is still no perfect single measure that captures all the aspects of food

insecurity. In the historical evolution of food security measurements, different approaches have been used to capture the various aspects embraced in the concept (Haysom & Tawodzera 2018). By using multiple food security measurements, the study seeks to provide a more accurate understanding of household food insecurity in urban and rural Maseru.

Specifically, to capture the households' experiences of food insecurity, both psychosocial and physical, the study employed three of the Food Insecurity Experience-Based Measurement Scales: namely, the Household Food Insecurity Access Scale (HFIAS), which is a measure of the levels of household food insecurity (Coates, Swindale & Bilinsky 2007); the Household Food Insecurity Access Prevalence (HFIAP), which is a measure used to categorise households into four levels of household food security (Coates et al. 2007); and the Months of Adequate Household Food Provisioning (MAHFP), which captures a longer recall of food security challenges (Swindale & Bilinsky 2010). This set of measures views food past its production and trade, to include cultural aspects and intangible subjects (Haysom & Tawodzera 2018), and was thus crucial for fulfilling the objectives of this study.

The study also included a dietary intake measurement, the Household Dietary Diversity Score (HDDS), which serves as an effective food and nutrition security proxy indicator, focusing on the quality and variety of food (Bilinsky & Swindale 2006). This measurement attempts to facilitate the use of more holistic responses to food insecurity (Haysom & Tawodzera 2018). Lastly, in order to understand household food security through a wider and more encompassing measurement approach, this study employed the Hungry Cities Food Purchases Matrix (HCFPM), a measure of food purchasing and sourcing behaviour that is useful for capturing the ways in which households interact with the food system's retail environment (Crush & McCordic 2017). Each measure, and its relevance to the study, is highlighted and discussed in detail below.

Household Food Insecurity Access Scale (HFIAS): The HFIAS is an indicator of the access component of food insecurity, used to capture and estimate the prevalence of household food insecurity in the previous month (Coates et al. 2007). It is calculated for each of the surveyed households based on nine "frequency-of-occurrence" questions, which cover the three domains of household food access: namely, anxiety and uncertainty; insufficient quality; and insufficient food intake and its physical consequences. Each question is asked with a recall period of four weeks (30 days) and comprises four possible ordinal-level answers. The HFIAS score is a product of the summation of the answers to the nine questions, based on which each

household is positioned along a continuum of severity, ranging from a minimum score of 0 to a maximum score of 27. An HFIAS score of 0 means a household has experienced the least possible food insecurity over the past four weeks, while a score of 27 means a household has experienced the greatest possible food insecurity over the past four weeks.

The study also used Household Food Insecurity Access-Related Domains, which provide specific, disaggregated information about the behaviours and perceptions of the surveyed households, thus helping illuminate the characteristics of the household food insecurity experienced in each participating household. In particular, these domains provide summary information on the prevalence of households experiencing one or more of the behaviours in each of the three domains of household food access (anxiety and uncertainty; insufficient quality; and insufficient food intake and its physical consequences). Household Food Insecurity Access-Related Domains present the percentage of households that responded affirmatively to each of the nine HFIAS questions, regardless of the frequency of the experience; this reveals the percentage of households experiencing that specific condition at any level of severity.

Household Food Insecurity Access Prevalence (HFIAP): The HFIAP score is a complementary, ordinal-level measure of household food access that categorises the participating households into four levels of household food insecurity (access): food secure, mildly food insecure, moderately food insecure and severely food insecure (Coates et al. 2007). The HFIA category variable is calculated for each household by applying a scoring algorithm to the responses recorded to the nine questions in the HFIAS. Based on the HFIAP status indicator, "households are categorized as increasingly food insecure as they respond affirmatively to more severe conditions and/or experience those conditions more frequently" (Coates et al. 2007: 19). As explained by Coates et al. (2007), the HFIAP indicator is crucial for reporting the prevalence of household food insecurity, which can aid in making geographic-targeting decisions.

Months of Adequate Household Food Provisioning (MAHFP): The MAHFP is a household-level measure of food security that identifies and reports the months in which there was limited access to food over the previous 12-month period. It reflects the months when household food insecurity was highest and how food insecurity fluctuated over the year, thus capturing the ability of the household to ensure that food is available above a minimum level all year round (Swindale & Bilinsky 2010). The MAHFP scale presents a score between 0 and 12, where

lower scores signify worse long-term household food access and higher scores represent better long-term household food access (McCordic et al. 2018).

Household Dietary Diversity Score (HDDS): The HDDS is a proxy of food insecurity that provides insights into household food access through improved household food consumption (Bilinsky & Swindale 2006). The information on household food consumption is recorded and categorised according to the 12 food groups presented in the HDD questionnaire. The food groups covered in this scale include grains, ground provisions, vegetables, fruits, meat products, eggs, fish, beans and nuts, milk products, oils, sugar, and other condiments. The HDDS variable is calculated for each household and yields a score ranging from 0 to 12. A high HDDS score signifies greater dietary diversity and thus improved nutritional quality within a household diet, while a low score indicates unimproved nutritional quality and minimal dietary diversity. To obtain a more meaningful indicator than the simple knowledge that households consume four different food-types, the average HDDS is also recorded. A high average HDDS reflects diversity in both macro- and micronutrient intake, thus providing a quantifiable measure of improved household food access.

Hungry Cities Food Purchases Matrix (HCFPM): The HCFPM is a food security metric that assesses not only household food insecurity but also household interactions with the broader food system (Crush & McCordic 2017). It situates household food purchasing and sourcing behaviour within the food system's retail environment. While this metric was originally developed for measuring the behaviour of households within the urban food system (Crush & Mccordic 2017), it was adopted in this study to also measure the behaviour of households within the rural system. The matrix is constructed by making a list of food items purchased by the sampled households over the past four weeks. The HCFPM measures whether each listed food item was purchased in the month prior to the survey, the frequency of purchase during the month, the source(s) where the item is often purchased and the geographical location of these source(s).

3.4 "Filling in the gaps" using mixed methods

Household food insecurity is a complex challenge whose multiple dimensions can be assessed in either a quantitative or a qualitative manner (Haysom & Tawodzera 2018). Consequently, in order to address food security challenges in the most comprehensive way, various quantitative and qualitative methods of research were combined within the present study—an

approach that has been established as valuable (Coates, Wilde, Webb, Rogers & Houser 2006; Fenton et al. 2012; Nickanor 2013). In food studies, quantitative methods are particularly useful for capturing the frequency and severity of food security, while qualitative methods provide a more in-depth understanding of the feelings and emotions surrounding what it means to be food insecure (Coates et al. 2006). As Creswell (2014) confirms, qualitative data tends to take the form of open-ended responses, providing more in-depth, process-oriented insights than quantitative data. By contrast, quantitative data involves predetermined closed-ended responses, which tends to bring out a static picture of the social phenomenon being studied (Bryman et al. 2014). As has been stressed throughout this paper, this study recognises the value of both methods of research.

In order to fulfil the main objective of this research—exploring the multiple meanings of food security through the lived experiences of rural and urban households—the study employed the "filling in the gaps" form of mixed methods, which offers the prospect of being able to combine both research methods to enhance understanding (Bryman et al. 2014). This approach integrates both triangulation and complementarity into mixed methods research. As stipulated by Bryman et al. (2014), the former term refers to the use of quantitative data to endorse qualitative research findings, or vice versa, while the latter term involves the use of two separate research strategies so that the various aspects of an investigation can be more robust. Both quantitative and qualitative methods have unique, complementary strengths and different weaknesses. This integration process capitalises on the strengths of each research approach, while offsetting the weaknesses. Through triangulation, moreover, the level of confidence in the inferences drawn from the research findings is increased (Coates et al. 2006). The purpose of triangulation in any study is, therefore, to increase the credibility and validity of the results established from the qualitative research.

Complementarity also occurs when the researcher supplements the findings with methods drawn from another research approach (Bryman et al. 2014). The purpose of this technique in the study is to ensure that the different research questions are addressed by the most appropriate methods, while also allowing for the different elements to be interwoven (Bryman et al. 2014). For example, both semi-structured and structured interviews are used to complement the information gathered, where the unstructured qualitative approach to data collection emphasises meanings and the more structured quantitative approach focuses on investigating a specific set of issues (Bryman et al. 2014). In this study, quantitative methods

and results were used to shed light on the findings from the qualitative investigation. In other words, the static picture of household food insecurity in Maseru provided by quantitative methods became valuable for identifying general patterns, which in turn allowed the research to proceed to an analysis of the dynamic processes entailed in what it means and how it feels to be food insecure.

The quantitative component of my methodology drew on more conventional survey techniques that comprised a suite of comprehensive food security measurements from the contemporary literature (Battersby et al. 2016; Crush et al. 2017; Frayne et al. 2010; Leduka et al. 2015; McCordic et al. 2018). These included the widely used and validated international cross-cultural scales developed by the Food and Nutrition Technical Assistance (FANTA) Project to assess levels of food insecurity, along with the HCFPM, developed by the Hungry Cities Partnership. These measures allow for specific issues relating to food insecurity to be explored and may also be useful for developing a more quantitative approach that is specific to a community's needs (Fenton et al. 2012).

3.5 Summary

The employment of mixed methods in this study provides a better understanding of household food insecurity than that which would emerge if just one method was used. The chapter discussed and examined the rationale for the research paradigm, methodology and methods research adopted in the study. The sample and fieldwork of the study were also described.

Chapter 4: Findings

4.1 Introduction

This chapter presents the results of the study that were derived from a combination of suitable and complementary quantitative and qualitative methods, providing insights into the lived experiences of the food insecure in Maseru and assessing whether these experiences differ according to geographic location. In order to protect the identity of the participating households, all names have been changed.

4.2 Preliminary analysis

Two of the participating households were urban—namely, hh1 and hh2—and the other two, hh3 and hh4, were rural. Hh1 is a female-headed household of two members, an unemployed woman, "'Malintle", in her mid-40s and her son, who live together in a cement/brick one-room rented house with a corrugated-iron roof. The key source of monthly income available to the household comes from a security guard job the son works, which, like many security guard jobs in Maseru, pays way less than the minimum monthly wage of M1907.00 (an equivalent of R1907.00) (Lesotho Government Gazette 2019). The rest of the participants, hh2, hh3 and hh4, receive a governmental old-age pension "a non-contributory, unconditional cash transfer paid to all Basotho over the age of 70 who are not getting any other pension from the government—a safety-net program also known as Old Age Pension" (The World Bank 2011: 50). Hh2 refers to the household of "'Malimpho", a female old-age pensioner living in a small one-roomed house built from traditional materials (stone and mud) with a corrugated-iron roof. Hh3 is a female-headed household of three persons: an old-age pensioner, "'Maletlotlo", who lives with her son and a grandchild in two traditional rondavels built of stone and mud, with straw roofing. Hh4 is the household of "'Malereko", a female old-age pensioner living alone in an improved rondavel built of stone and mud, with straw roofing and a cemented veranda.

4.3 Quantitative results

This section presents the results of a survey questionnaire covering a comprehensive suite of food security measures, adopted from the work of the FANTA project (Bilinsky & Swindale 2006; Coates et al. 2007; Swindale & Bilinsky 2010) and the Hungry Cities project (Crush & McCordic 2017). These measures indicate the various aspects of household food security and the variations in the lived food security experiences of urban versus rural households.

Specifically, this section includes the findings from the Household Food Insecurity Access Scale (HFIAS), which is sensitive to changes in the household food insecurity situation of a population over time. Similarly, the average HFIAS score, which is a continuous variable, is sensitive to smaller increments of change over time. In addition to the average HFIAS score, this section reports the Household Food Insecurity Access Prevalence (HFIAP) indicator score, which is a complementary, ordinal-level measure less sensitive to changes. The Household Dietary Diversity Score (HDDS), which picks up on changes in household income, becomes useful in understanding household food consumption and thus the access dimension of food insecurity. The Months of Adequate Household Food Provisioning (MAHFP) measure is sensitive to changes in the household's ability to provide for its food needs throughout the year. Finally, the Hungry Cities Food Purchases Matrix (HCFPM) provides broader insight into household food sourcing and food system interactions.

Table 2 below provides a summary of the quantitative measures adopted in this study. It shows the HFIAS scores of the surveyed households (n=4) on the 0–27 HFIAS scale, with an average HFIAS score of 11.5. As explained in Coates et al. (2007), HFIAS scores measure the degree of household food insecurity experienced in the previous month and are calculated for each household based on the answers to the nine "frequency-of-occurrence" questions presented in part 1 of appendix C. The calculated HFIAS scores for the sampled households—that is, hh1, hh2, hh3 and hh4—were 16, 10, 6 and 14, respectively. The low HFIAS scores of 6 and 10 for hh3 and hh2 indicate relatively lower degrees of food insecurity in these households. The overall severity of food insecurity was higher in urban regions, which had an average HFIAS score of 13, as compared to the average HFIAS score of 10 in rural regions.

Table 2: Summary of the quantitative food security measures adopted in this study (excluding the Hungry Cities matrix)

Area	Urban		Rural		Total
Household number	hh1	hh2	hh3	hh4	4
Household size	2 members	1 member	3 members	1 member	
HFIAS score	16	10	6	14	46
Average HFIAS score	13		10		11.5
HFIAP status indicator	Severely food insecure	Severely food insecure	Severely food insecure	Severely food insecure	

HFIA prevalence					100%
HDD	5	5	4	4	
Average HDD					4.5
MAHFP	8	5	0	1	
Average MAHFP	6.5		0.5		3.5

The HFIAP score allows for participating households to be classified into four levels of household food insecurity (access): food secure, mildly food insecure, moderately food insecure and severely food insecure (Coates et al., 2007). The HFIA category variable is calculated for each household by applying a scoring algorithm to the responses recorded to the nine questions in the HFIAS: "households are categorized as increasingly food insecure as they respond affirmatively to more severe conditions and/or experience those conditions more frequently" (Coates et al. 2007). According to the HFIAP indicator, all the surveyed households in this study were severely food insecure, at a prevalence rate of 100%. Table 3 below illustrates this categorisation. The categorisation scheme is designed to ensure that a household's set of responses will place them in a single, unique category.

Table 3: The Household Food Insecurity Access Prevalence (HFIAP) status indicator

Question	**Frequency**		
	1=Rarely	**2=Sometimes**	**3=Often**
1a			
2a			
3a			
4a			
5a			
6a			
7a			
8a			
9a			

Categories of food insecurity (access)	
	Food secure
	Mildly food insecure
	Moderately food insecure
	Severely food insecure

Household Food Insecurity Access-Related Conditions present the percentage of households that responded affirmatively to each of the nine HFIAS questions, regardless of the frequency of the experience, thus measuring the percentage of households experiencing a specific condition at any level of severity (Coates et al. 2007). As this measure revealed in table 2, 50% of the surveyed households had little diversity in the types of food they consumed and 100% of the households sometimes ate smaller meals than they needed. One household—or 25% of the sampled households—had gone to sleep hungry in the previous four weeks.

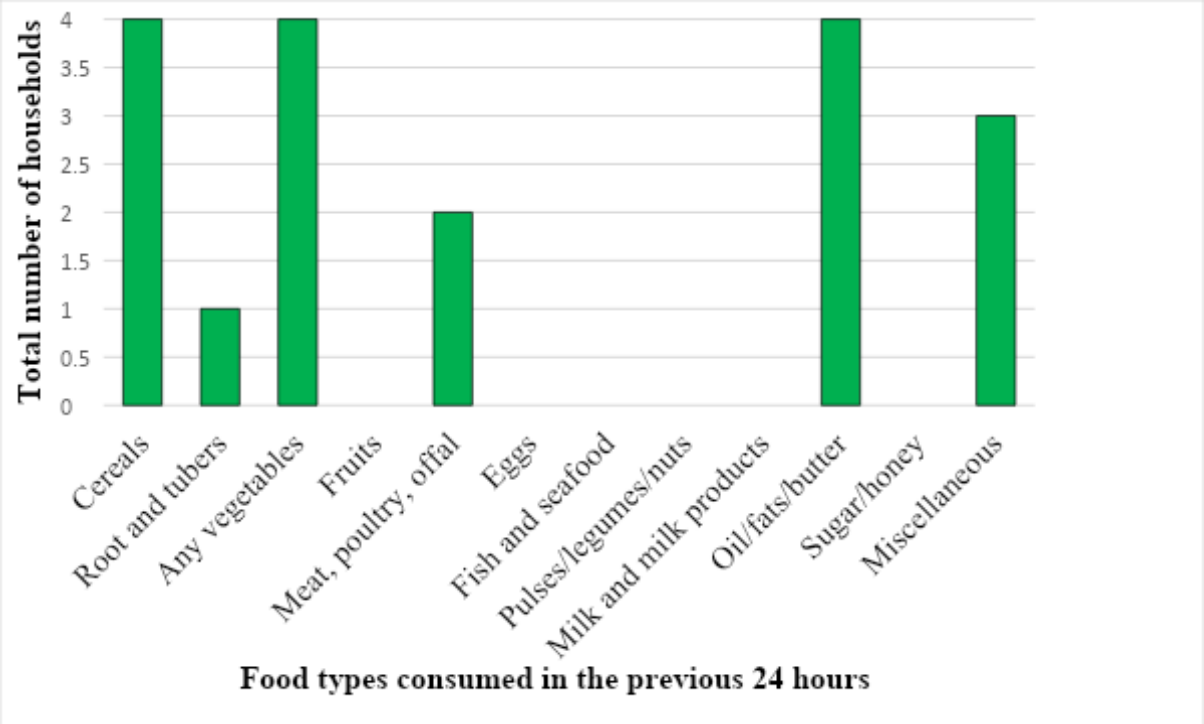

Figure 3: Aggregate food types consumed by the sampled households (n=4) in the previous 24 hours in September 2018.

Figure 3 above indicates the 12 main food groups that had been consumed by the sampled households in the previous 24 hours, as captured by the HDD questionnaire (see Swindale & Bilinsky 2006). This information is useful for calculating HDD scores for each household and determining the dietary diversity and improved nutritional quality of each household (Swindale & Bilinsky 2006). The calculated scores range from 0 to 12, where 0 signifies low dietary diversity and a high score signifies greater dietary diversity. The two sampled households located in urban regions, hh1 and hh2, ate at least five food groups and both had HDD scores of 5, while the two located in rural areas, hh3 and hh4, ate from fewer food groups and both had HDD scores of 4. The average HDDS for all households in the survey was 4.5, with the starch staple known as *papa* (a stiff maize-meal porridge) being the dominant food type eaten.

Miscellaneous foods included non-nutritive beverages such as tea and traditional Sesotho beer. These were consumed in three of the surveyed households, hh1, hh2 and hh3, where traditional Sesotho beer, made from sorghum, was the most commonly consumed beverage. When the non-nutritive food items were removed from the dietary intake of the sample, the average HDD score dropped to 3.75. Both the surveyed households in urban regions ate some form of animal protein, while those in rural regions ate none. All households consumed some form of *moroho*, a wild green crop that is cooked, but also any cooked leafy greens, such as spinach, kale and cabbage. None of the surveyed households had consumed eggs, pulse/legumes/nuts, milk or milk products, fish or seafood, sugar/honey, or any kind of fruit in the previous 24 hours.

To identify the number of months during which the sampled households did not have access to sufficient food to meet their needs in the previous 12 months, the MAHFP scores of the sampled households were calculated. The MAHFP scores of the households in urban regions, hh1 and hh2, were 8 and 5 respectively. These scores were slightly higher than those of the rural households, hh3 and hh4, which were 0 and 1, respectively. For hh3, the associated MAHFP score of 0 was calculated on the basis that the household had a steady supply of either *papa* and *moroho* or *papa* and boiled beans at all times. According to ‘Malereko, these dishes are prepared from crops sourced mainly from the household’s subsistence farming. The rest of the households, however, had experienced insufficient funds at least once in the previous 12 months, resulting in a lack of adequate food supply during these months.

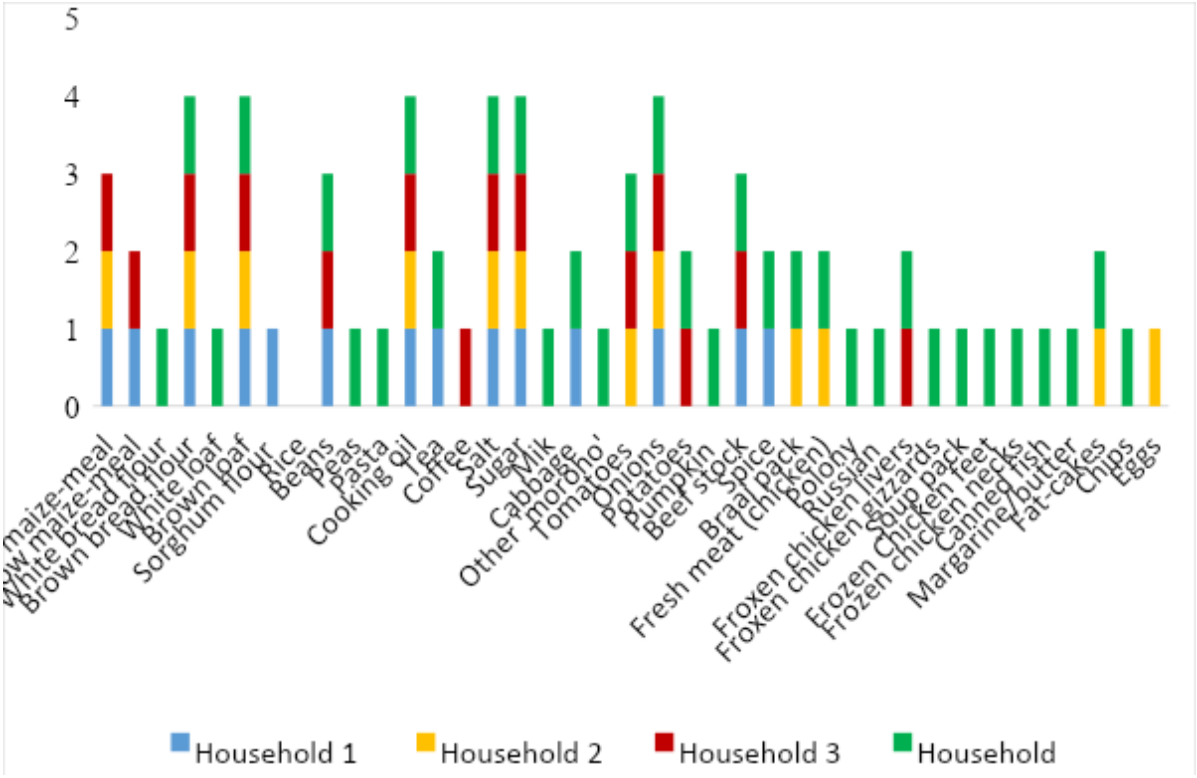

Figure 4: Food items purchased by the surveyed households in the previous four weeks

Figure 4 shows that, with the exception of hh4, the surveyed households did not purchase over half the food items listed in the HCFPM. This outcome is associated with households' preferences, a lack of economic resources and the fact that some households produced specific food items for their own consumption. Specifically, 'Malintle specified that it was lack of finances that was a major constraint in hh1 for lack of sufficient food supplies. In hh2, 'Malimpho said that she preferred sourcing most of her food from her own farming and relatives farming with just a few food items sourced from shops and supermarkets. In hh3, 'Maletlotlo argued that she produced most of her food items and that she preferred sourcing from own-production over buying from shops and supermarkets. The key food items purchased by the surveyed households in the previous four weeks, as represented in the HCFPM, included white maize-meal, brown bread flour, brown loaves of bread, cooking oil, salt, sugar, tomatoes, onions, beans, and beef stock. No household had bought rice in the previous four weeks. Below, I consider the various components of the HCFPM in relation to the selected (the most purchased) food items, demonstrating how the surveyed households interact with the food system at the point of sale.

The first component of the HCFPM provides insight into household food purchase patterns by frequency. The results demonstrate that household purchases for that month involved bulk

purchases of staples (such as white maize-meal) and brown bread flour, as well as other food items such as cooking oil, salt, sugar and beans. During the same month, food purchases for two of the four sampled households in the rural region, hh3 and hh4, also included fresh meat (chicken). Based on the reported HDD scores, however, hh3 and hh4 did not consume any form of meat in the previous 24 hours from the time of survey. All households purchased a brown loaf at least once a month, with hh2 purchasing the brown loaf weekly. For perishable foods such as vegetables (tomatoes and onions), the frequency of purchase ranged from monthly bulk to small quantities almost daily.

The next component of the HCFPM provides insight into household food purchases by place of purchase. The prevalent food sources identified in the study were supermarkets (mostly foreign-owned), small formal shops (often locally owned), street sellers and vendors, local farmers and spazas. Supermarkets, for the purpose of this study, are small-scale local grocery stores, as opposed to the large South African supermarket chains, such as Shoprite, Game and Pick n Pay, found in Maseru. As Leduka et al. (2015) explain, these small retail outlets that call themselves supermarkets are owned by Chinese immigrants, mainly from Fujian Province in China. See the photo below.

Photo 1: A foreign-owned supermarket in Lithoteng, Maseru (20 September 2018)

Small formal shops, like supermarkets, are registered grocery outlets predominantly owned by Basotho entrepreneurs. These retail outlets and corner stores are typically smaller than

supermarkets. Street sellers and vendors, on the other hand, are unregistered, temporary traders who sell fruit, vegetables and other food, as well as clothing and household items, predominantly in streets and alleyway spaces (Leduka et al. 2015). Local farmers can be defined as individuals who produce crops or livestock for subsistence use but also sell excess in their communities. Spaza shops, like street vendors, are unregistered or informal retail shops.

Photo 2: One of the local shops in the village of Ha Khoeli, Maseru (14 September 2018)

Food items, with the exception of fresh meat (chicken), are generally purchased from a combination of such food sources. Supermarkets and small formal shops are key sources for bulk purchases of items such as white maize-meal and brown bread flour, as well as other food items such as salt and sugar. The findings indicate that, in rural regions, supermarkets dominated when it came to bulk purchases, while small formal shops dominated in urban regions. Small formal shops were the dominant source for brown loaves in urban regions, while street sellers and vendors dominated in rural regions. The main sources of beans were small formal shops and local farmers: small formal shops dominated sales in urban regions and local farmers dominated sales in rural regions. Cooking oil in the study was sourced from a variety of places, with sales in urban regions paired between supermarkets and small formal shops and sales in rural regions dominated by street sellers and vendors. A mix of small formal shops, street sellers and vendors and local farmers were identified as key sources for tomatoes and onions, with small formal shops predominant in urban regions and street vendor and local

farmers predominant in rural regions. For beef stock sales, small formal shops led in rural regions and spazas led in urban regions. Local farmers were the key source for fresh meat (chicken) in both urban and rural households.

Another component of the HCFPM looks into household food purchases by location of purchase. This highlights the role played by spatial location and convenience in the way both urban and rural food systems function. The results show that the sampled households' purchases happen within walking distance from their homes or else at or near old-age pension paying stations, both in their neighbourhoods and in other neighbourhoods. Specifically, hh1 procures all the selected food items within walking distance from home; hh2 procures the food items within walking distance from home and also on the way back from the pensioners' paying station in the neighbourhood; hh3 procures food items within walking distance from home and also at or near a pension paying station in another area; hh4 procures all the food items at or near a pension paying station in another area. Generally, the sampled urban households procure food within walking distance from their homes, while the rural households' major purchases occur at or near a pensioners' paying station at Ha Mofoka.

4.4 Qualitative results

The subsequent sections present findings based on the key themes or categories identified from the qualitative data. These themes relate to the multiple meanings of food insecurity according to the lived experiences of poor urban and rural households; how the poor manage food availability, access and utilisation on a daily basis; households' food practices and traditions; whether there have been any changes in their food practices or diets; and what these changes mean to them. While the themes are described individually, the boundaries are blurry and often overlap. They are discussed in light of the research objectives, in order to identify the similarities and differences between household food insecurity in urban regions and rural regions.

The qualitative findings presented here drew on a variety of methods and tools, including participant observation, written field notes, audio recordings, semi-structured interviews and journaling. While the quantitative questionnaires used in the study were precise and required no details from participants, in cases where participants did provide additional information, notes were taken and these findings are presented in this section. In addition, photographs and extracts from the semi-structured interview scripts are used to bring the findings to life. As

mentioned in the previous chapter, all participant names have been changed. The two participating households in urban Maseru are hh1 and hh2, headed by 'Malintle and 'Malimpho respectively; the other two households, hh3 and hh4, are rural, headed by 'Maletlotlo and 'Malereko respectively. This section presents the data from all four sampled households, although, inevitably, some are presented in more depth than others. Relevant information provided by another member of those sampled households with more than one household member—that is, hh1 and hh3—is also presented.

4.4.1 Food availability

According to Ingram (2011) and Ericksen (2008), the availability of food is a function of the production, distribution and exchange of food. In this study, it was established that food availability means different things to different participants. According to 'Malintle, the availability of food refers to the production of sufficient food to meet all the household's food needs. This definition is almost similar to that provided by 'Maletlotlo, who argued that food availability is safeguarded through hard work and dedication to farming. By contrast, 'Malimpho stated that the availability of food refers to how readily food can be obtained in the neighbourhood. Finally, 'Malereko defined food availability as having money to buy food. The rest of this section describes how the sampled households manage food availability in their everyday lives.

For all four participants, subsistence farming was once a major source of food, with just a few food items being sourced from shops or supermarkets. 'Malintle from hh1 explained that farming activities came to a halt over two decades ago, when her household relocated from a rural village to live in a rented house in urban Maseru. In hh2 and hh4, 'Malimpho and 'Malereko both indicated that this change had occurred gradually over the years, as they began selling their fields to other people for farming or construction. They explained that this left minimal land for their own households to farm on, resulting in their relying on other people's farming activities and buying food from small shops and, increasingly, supermarkets. Conversely, 'Malereko stated that subsistence farming remains a key food supply for hh3. This is despite a decrease in farming activities and yields compared to how much she said she used to produce. For 'Maletlotlo, this decline in hh3's farming activities is largely associated with old-age and her inability to participate in more farming activities, along with a lack of farming resources, such as cattle for ploughing her fields.

Three of the four sampled households—hh2, hh3 and hh4—practise some form of farming, whether rearing domestic animals or growing crops for subsistence consumption. This is with the exception of hh1 in urban Maseru, which resides in a rented house with several other houses in the same plot. Most of the topsoil in the yard is paved with cement, leaving little or no space for even a small garden near the house, which is where many households living in the city or in rented houses grow crops. The rest of the households—that is, hh2, hh3 and hh4—live in their own houses and have at least two gardens on their properties in which they seasonally grow crops. Moreover, hh3 in rural Maseru owns several fields in the neighbourhood of Ha Khoeli and in the distant village of Koma-Koma that produce crops.

This study was carried out during the last days of the winter, and heading into the spring season, a time when most fields and gardens are dry and without crops. None of the farming households had crops in their gardens, with the exception of one household in rural Maseru (hh3), which had a garden with rows of cabbage, spinach and spring onions. From observation, this might have been achieved through the help of other members of the households, specifically the participant's older son and one of her grandchildren. The other farming households, hh2 and hh4, were, like hh3, headed by an old-age pensioner, but they had one member per household, which meant that only one person's labour was available for all the household farming activities. In addition, 'Maletlotlo, compared to the other participants, held strong convictions about the value of relying on her own food production. She suggested that she preferred producing and eating food from her own fields and livestock over food items she had to buy. Although the participant believed that the food items she bought from shops and supermarkets were perfect substitutes for the items she grew at home, she maintained that she did not like paying for something that she could have just as easily produced herself:

> Boholo ba lijo tsaka mona lapeng kea itlhahisetsa. Joalokaha u bona…re itemela moroho. Molimo o re file mobu hore re leme, ka lebaka lena, nkeke ka ea lishopong ho ea reka seo nka e itlhahisetsang sona ha bo bebe. (Most of the food in the house comes from my family subsistence farming. As you can see [She points again with the stick in her hand to a few plots in the garden, not far from where we are sitting], we grow our own moroho. God has given us the soil to farm. Therefore, I can never go to the shops to buy what I can just as easily grow for myself.)

Photo 3: A garden of cabbage in hh3's compound in Ha Khoeli, Maseru (12 September 2018)

'Malimpho of hh2 in urban Maseru had several small crops and herbs growing in some of her gardens. These included spring onions, "Rosmarinus officinalis", commonly known as rosemary, "Allium Sativum" also known as *konofolo,* Aloe polyphylla commonly known as Spiral Aloe, Aloe ferox commonly known as bitter aloe, "Aloiampelos striatula" formally known as Aloe striatula and "metalasia muricata", also known as *sehalahala-se-seputsoa.* Likewise, one corner garden in hh4's yard was covered with "Urtica dioica" often known as stinging nettle crops, or simply *bobatsi.*

During the study, 'Malimpho, 'Maletlotlo and 'Malereko explained that they were at the time preparing for the planting season, which involved growing crops for the autumn harvest the following year. 'Malimpho stated that during this time she often planted a variety of leafy-green vegetables, broadly known as *moroho.* By contrast, 'Malereko stated that she frequently produced maize and pumpkin. Compared to the two households of 'Malimpho (hh2) and 'Malereko (hh4), 'Maletlotlo's household (hh3) grew visibly more crops, both in quantity and variety. This observation was confirmed by 'Maletlotlo, who stated that every year she produced a variety of leafy-green vegetables and other vegetables such as pumpkins and maize.

She added that, at times, she planted green beans, a variety of cereals, such as sorghum and wheat, and legumes (beans and peas).

From observation, the farming practice dominant in both regions is rain-fed subsistence farming. In addition, the vegetable gardens found in hh3 and hh4 in rural Maseru are watered using the grey water generated from various household activities. During the study, 'Maletlotlo was observed throwing the grey water from washing laundry on one of her vegetable gardens. Similarly, 'Malereko was observed watering her garden of stinging nettles using the grey water generated from washing dishes. According to 'Malereko, grey water is good for watering crops:

> Metsi a sebelitseng a matle haholo bakeng sa lijalo. Le ha ke hlatsoa liaparo tsaka, metsi ano ke a qhalla lirapeng tsaka mona. Hona hase feela hore ke seke ka senya metsi empa ke hobane ana a sebelitsing a se ana le matsoai a hlokoang ke lijalo ha ho bapisoa le a tsoang pompong. (Grey water is very good for the plants. Whenever I do my laundry, I also dispose of the grey water in my gardens as a way of watering my plants. This is not only to make sure that I do not waste water, but it is because the grey water is good for the plants since it is full of minerals and salts as compared to tap water).

'Maletlotlo and 'Malereko explained that, to ensure good yields, they implemented various methods advantageous for maintaining soil fertility in their home gardens and fields. During the time of the study, a large plot at the end of 'Maletlotlo's property was observed with heaps of cow manure in it. 'Maletlotlo explained that she was preparing the plot for the next autumn season and, with the help of her son and grandson, she was able to collect the manure from her son's cattle kraal. In addition, 'Maletlotlo said that she used wood ash collected from the fireplace for plots in the compound and fertilisers in her fields. A half-full sack of fertilisers was observed in one of the household's rondavels. 'Malereko also said that she used ash collected from the fireplace and the *paola* (a large tin, holding about 10 litres or more, with holes all around, used as an indoor or outdoor stove in hh4). This practice of scattering ashes on the plots in hh4 seems to have lasted for many years, as the soil in one of the gardens was virtually grey.

Photo 4: A plot with heaps of cow manure collected from the cattle kraal in 'Maletlotlo's home in Ha Khoeli, Maseru (12 September 2018)

While the study found that seeds were occasionally purchased from supermarkets by the farming households (hh2, hh3 and hh4), the participants suggested that they predominantly saved seeds from their previous harvests. 'Malereko also indicated that she sometimes got seeds from her friends' previous harvests and kept the seeds thereafter. During the time of the study, several containers were observed in hh3 and hh4 in rural Maseru where a variety of seeds for roots, pulse/legumes and other plants were stored. Although farming households' processes of harvesting or picking seeds varied across the types of crops, the study established that the associated traditions and beliefs were quite similar in the two rural households, hh3 and hh4. 'Malereko and 'Maletlotlo both suggested that the key to picking and saving seeds for future use was ensuring that they came from the best harvest. They shared the belief that picking seeds from the best harvest would help the farmer produce identical characteristics in their future harvest. For pumpkin seeds, for instance, 'Malereko explained that the seeds were often picked from a ripe pumpkin that was full of flavour and big in size and had a defined shape during the time of cooking and food preparation. She indicated that seeds were then left to dry in the sun and stored in a container for future use. She said that the same applied to picking maize seeds. As was also confirmed by 'Maletlotlo, a ripe cob of maize that is longer in size and has more defined lines of grains is chosen and left to dry in the sun either while still on the cob or when it has been removed. Once it has been dried, it is kept in a container for planting in the future. For leafy-green vegetables such as spinach, cabbage and turnip, the study found that the crops were left to grow beyond their harvesting time, allowing them to bear

flowers and later seeds, which were harvested and saved for future use. During the time of the study, hh3 had a garden of over-ripe turnip crops from which ’Maletlotlo claimed she would be harvesting seeds (see Photo 5 below).

Photo 5: Turnip greens left to produce seeds for future planting in hh3’s garden in Ha Khoeli, Maseru (11 September 2018)

During a brief tour of hh2’s yard, a variety of herbs and indigenous plants was observed. These included a rosemary plant, which had grown into one big shrub. I was somewhat amazed to find a live rosemary plant, as so far all I had seen was either the fresh or dried leaves sold in supermarkets. ’Malimpho decided to cut a few branches from the plant and give them to me to plant. Excited, I accepted the branches and thanked the participant. However, ’Malimpho firmly told me it was wrong to thank someone for offering seeds. She said that thanking a seed was equivalent to rejecting it and, as a result, the seed would not germinate or grow. She illustrated that it was okay to say “Thank you” when offered food, but this too should be done at the end of eating, since if it happened at the beginning of the meal it meant that someone was politely turning down the food. She further explained that for someone who did not understand Sesotho, this might look impolite, but for those who understood they would know this was how it should be. (Unfortunately, despite ’Malimpho’s clear guidelines as to how to grow the rosemary branches, all the branches I received that day dried up and died. I am unsure

if I did not take care of the branches properly or if it really was the fact that I had thanked the seed when it was offered to me.)

Hh3 and hh4 in rural Maseru rear "traditionally raised" chickens, commonly known as "Sesotho" chickens. Both 'Maletlotlo and 'Malereko explained that this was where their households regularly sourced eggs and, once in a while, meat. Both households allow the chickens to freely roam around the yard and the neighbouring yards, feeding on small insects, grass and other leafy vegetables and drinking from the streams of water forming from the neighbouring community taps. At least once a day, the chickens are fed from maize grains. These, in 'Maletlotlo's household, were identified as being mostly post-harvest waste, made up of fresh harvest that had not reached full maturity by the time of the harvest. In 'Malereko's household, chicken feeds comprised fresh maize grains, which she was observed feeding to the chickens during the time of the study.

In both households, the flock of chickens consisted of a mix of hens and roosters. During the study, one of the hens at 'Maletlotlo's household was observed entering one of the rondavels to lay eggs despite the presence of the chicken kraal in front of the huts. According to 'Maletlotlo, hens are often groomed and trained to go inside the hut whenever it is time to lay eggs. She explained that this was crucial to ensure that the hens did not end up laying eggs in any other place around the yard, where they could be easily found and eaten by dogs. Indoors, the household can easily retrieve all the eggs laid by the hens.

Despite being kept for meat and eggs, 'Maletlotlo pointed out that one of the hens—the one with white feathers—held some sentimental value in the flock. During this part of the conversation, 'Maletlotlo's son was at home and, overhearing the conversation, he came and sat with us. He argued that this hen was his favourite over all the other chickens: he believed that it had distinct abilities, which included cleansing a person of misfortunes. He further stated that a few black feathers on the hen also made it the most preferred and best taken care of, since its markings reflected the fact that its owner was an Orlando Pirates soccer team fan. The household seemed to have no intention of slaughtering the hen anytime soon; rather, both 'Maletlotlo and her son suggested that they were looking for a white rooster to fertilise its eggs and hatch them into baby chicks. In this way, the family believes they will increase the chances of one or two chicks retaining the white feathers:

> Khoho e ts'oeu e hlatsoa sisila. Ka lebaka lena, ntse ke batlana le mokoko o mosoeu o ka nthusang ho fumana leha ese ele tsuonyana ele 'ngoe kapa tse peli tse 'mala o mosoeu joaloka

sethole sena. Joalokaha o se bona, se na le masiba a mats'o mona le mane, a etsang ke e rate le ho feta joalokaha kele molateli e moholo oa Orlando Pirates. (A white chicken can be used to cleanse a person of misfortunes. I have been looking for a white cock that will increase the chances of this one having at least one or two chicks that retain the white colour of the hen. As you can see, it has a few black feathers, which I do not mind since I am the biggest fan of the Orlando Pirates football team [a fact that he confirmed by presenting me with an old photo of the Orlando Pirates squad that he kept in one of the huts].)

Photo 6: Traditionally raised chickens in 'Malereko's compound in Ha Khoeli, Maseru (16 September 2018)

Sourcing food from wild and indigenous vegetables was also identified as key in the three sampled households with their own properties (hh2, hh3 and hh4). Even 'Malintle from hh1 pointed out that, about a decade ago, before her household moved to the city, they used to source some of their food from indigenous or wild leafy vegetation. A range of indigenous vegetables was observed in both urban and rural Maseru. With the exception of hh1, the other sampled households (hh2, hh3 and hh4) all had a few of these indigenous vegetables growing around their yards and among their crops as weeds or unwanted plants. These included "tragopogon porrifolius", known as *moetse-oa-pere* ("mane of a horse", owing to its thin, elongated leaves); "oleraceus", a milk thistle known as *leshoabe*; the "adrosacea harebell" plant, also known as *tenane* (or simply "get tired of"); and *qhela* (or "put aside").

Photo 7: "Oleraceus", a milk thistle known as *leshoabe,* found in Lithoteng, Maseru (22 August 2018)

In addition to these, 'Malimpho explained that a variety of other indigenous vegetables grew during other seasons. For instance, "amaranthus hybridus", commonly called pigweed or simply *theepe* and "Chenopodium album" also known *seruoe*, are often in abundance during the spring and summer seasons. During the study, a Manson jar filled with dried pigweed or *theepe* was observed in hh4. This, according to 'Maletlotlo, was dried earlier in the year to make *mashoabatana* or *makoakoa* (dried leafy-green vegetables or *moroho*) for future use. 'Malimpho explained that other indigenous vegetables included "turczaninowii", a wild mustard known as *sentlhokojane*; *leharasoane*; and "sisymbrium capense", also known as *tlhako-ea-khomo* ("hoof of the cow", owing to the particular shape of the leaves), available during the winter season.

'Malimpho also indicated that a range of other indigenous vegetables and wild roots that were once in abundance in her neighbourhood had become extinct. These include species of "xysmalobium undulatum", a milk bush also known as *leshokhoa* or *poho-ts'ehla*; "multicaulis", a milk bush also known as *montsokoane*; and *sepaile-sa-naha*, also known as

wild radish, which 'Malimpho suggested grows around wetlands that are increasingly being destroyed. According to 'Malimpho, these species were lost as more land in her area was replaced with houses. She also argued that the weather in the area has become unfavourable, with less rainfall, resulting in some vegetation drying up and dying. Conversely, both the participants in rural Maseru ('Maletlotlo and 'Malereko) did not raise any concerns about the availability of indigenous vegetables in the area.

4.4.1.1 Gender roles in food production activities

Gender roles in food production activities were identified as key in 'Maletlotlo's household, where she lived with her son and grandchild. By contrast, 'Malimpho and 'Malereko asserted that they were responsible for all the production activities in their home gardens. 'Maletlotlo also suggested that she was responsible for farming the small gardens in the household compound, although she said she got assistance from other members of the household sometimes. She explained that the ploughing of larger pieces of lands, such as the fields, was carried out by her son or hired male workers. 'Maletlotlo also asserted that the planting of seeds in her family fields was often carried out by all the adults in the family and some close relatives, both male and female. She explained that a successful germination of seeds in the fields was followed by an activity known as *ho kofola* (or simply "chopping off"), where male workers removed weeds that might be growing among the crops. According to 'Maletlotlo, this activity precedes a process known as *ho hlaola* ("uprooting"), frequently done by women by means of a hoe, but male workers can also take part. 'Maletlotlo said that, due to old age, she no longer engaged in farming activities in the fields; instead, she hires workers from the village, whom she pays in the Lesotho currency, Maloti (M). She reported that she paid each worker M30 (a close equivalent of around R30 during the time this research took place) in cash per day of work in the fields.

As confirmed by the three property-owning participants, 'Malimpho, 'Maletlotlo and 'Malereko, most of the crops planted in home gardens or fields (for hh3) are grown and ready to eat by autumn the following year. These three participants explained that they were responsible for picking and preparing the crops from the gardens in their properties. As for the food grown in fields, 'Maletlotlo stipulated that it was her son who was responsible for picking the food and bringing it to the house for her to prepare. 'Maletlotlo stipulated further that, although the family used most of the crops, some were left in the gardens and fields, where

they ripened over time and were later harvested. She explained that harvesting in her family often happened during the winter season, when most crops had dried out.

Once again, 'Maletlotlo explained that all the adults in her family and some close relatives, both male and female, went to the fields for harvesting. She said that men were often the first to leave in the morning, guiding the cows, drawing the wagons and carrying the bales for storing the food and the tools for chopping the food. The women followed later. According to 'Maletlotlo, both women and men work together in the fields to fill the carts with food. Once the carts are filled with the harvest, the men once again hook up the cows, which are left to graze near the fields during harvesting. The cows are then guided home and everyone else who has been working in the fields follows. 'Maletlotlo stated that when the harvest reached her house, she prepared a space, with the help of her family, where the carts could drop off the food. She explained that this space could be anywhere in the yard where the family could easily keep an eye on the harvest and keep it covered, so as to protect it from being eaten by animals or from adverse weather conditions. During one visit to 'Maletlotlo's household, a pile of yellow maize cobs from the participant's fields was observed in one of her rondavels, protected from the weather and from animals. According to 'Maletlotlo, the process of harvesting often continues for several days, until all the crops in the fields are harvested.

4.4.1.2 Farming traditions

One of the customs of the farming households that was observed during fieldwork involves ways of engaging with soil. During the study, 'Malereko was mourning a relative who had recently passed on. She pointed out that she was not allowed to engage with the soil in any way during her mourning. As she explained this rule, 'Malereko looked visibly helpless and saddened by it. She wanted to turn the soil and plant some crops for the autumn by herself, as she normally did. She explained that, for those who violated this rule, there was the threat of harm and misfortune. She also stated that, although this practice used to be uniform across Basotho clans, several clans have performed a sort of feast as a way of breaking this requirement in their families. 'Maletlotlo suggested that, by so doing, the clans ensured that whatever harm or misfortune that would follow the violation of this rule was broken and the family was protected.

Another practice established by the study involves a ritual performed in the community of Ha Khoeli. Once the seeds for the autumn harvest have been planted by the farming households in

the area, 'Maletlotlo pointed out, the chief assigns a *ngaka-ea-sesotho* (a traditional Sesotho doctor) to perform a ritual known as *ho-thakhisetsa-sefako* ("protection from hail"). She stipulated that the tradition was meant to protect all the fields in the area from bad weather conditions, such as hail. For this ritual to become effective, 'Maletlotlo explained, the villagers are expected to follow three key rules once the traditional Sesotho doctor has performed the ritual. The first rule requires that households in the community do not have their clothes hung out on the lines during the day. That is, villagers can only hang clothes on the line in the mornings and evenings. The second rule, according to 'Maletlotlo, is that no one from the community can collect wood during the day. Lastly, those working in the fields are expected to stop their work shortly before midday and sit on the side of the field they are working on until after lunch, after which they can start again.

Photo 8: Some of the fields by the river bank in the area of Ha Khoeli, Maseru (16 September 2018)

Although the rest of the sampled households, hh1, hh2 and hh4, no longer farm in fields, the participants confirmed their knowledge of these rules and the importance of participating in this tradition. The participants suggested that, if the rules were observed, it was believed that all the fields protected by the performed ritual would not be hit by hail. They argued that, in most cases, when the hail came the spell redirected it to other areas. In addition to these rules, and as a way of ensuring that any person who went to check on the progress in the fields did

not interfere with the rituals performed, 'Malereko pointed out that such an individual had to gather shrubs and grass from near the fields and start a fire in the middle of the field being inspected. The person quietly checked the field as the fire burned, and only once the fire was extinguished could they leave the fields.

The study established that these beliefs were part of the practices of the families that participants were born into, and those of their parents' and grandparents' families in turn. To this day, some of the rules have never been questioned or explained. When I enquired where these beliefs come from, 'Malintle said that, as a child, questioning things such as this was considered disrespectful and would make the elders in the family angry. Hence, she never asked why.

4.4.1.3 Coping strategies around food availability

All the participants confirmed that they occasionally lacked sufficient quantities of appropriate food, with 'Malintle from hh1 experiencing this situation more often than the others. Feelings of uneasiness were observed in 'Malintle when she explained the intensity of the situation in her household. She explained that her household often eats what is available in the house and that these items may not necessarily constitute appropriate meals. Similarly, 'Malereko pointed out that there were times when she experienced a lack of adequate food and simply ate what was there. Both participants recalled incidents where they experienced lack. In one incident, 'Malintle explained that she was very hungry and the only food item available in the house was *papa*. With her last M1.00, she said she bought herself some "Simba chips", which she ate with *papa* for supper that night. 'Malereko recalled a few incidences where she had consumed *papa* on its own or with *motoho* just to avoid going to bed on an empty stomach.

One of the strategies used by 'Malintle and 'Maletlotlo to deal with the lack of sufficient quantities of appropriate food on a day-to-day basis is reducing the amount of food they consume per serving. 'Maletlotlo claimed that this strategy often allowed her to make sure that the little food left in her household went a long way. In addition, 'Malintle suggested that she also reduced the number of times she ate in a day, skipping lunch and only eating in the mornings and evenings. It was established that she does so to ensure that her son has enough to eat and can sometimes take a lunch box to work.

Finally, to overcome lack, all four participants stated that they turned to friends and relatives for support. Much-needed food items sometimes came in the form of gifts from friends or

relatives or as payment for the participants' engagement in a friend's or relative's farming activities. 'Malintle suggested that she often visited her relatives, who not only served her food during the visits but also gave her some food items to cook later. 'Malimpho mentioned that she got some of her food from her relatives' fields in a rural village in another district. She said she also received some food items from her children, who live elsewhere in Maseru. She further explained that she obtained some of her food items from her neighbours and friends:

> Nka se shoe ke tlala bahaisane le bakhotsi baka ntse ba le teng. (I can never die of hunger when my neighbours and friends are still around.)

Similarly, 'Malereko shared that one of her neighbours was a good friend who cared dearly for her and never let her go to bed without food. She said that her friend, who owned a cellphone, helped her contact her grandchildren, who lived elsewhere in Maseru and who then bought food and sent it by bus to the village. During times of lack, 'Maletlotlo, too, said she found a way to send a message to her daughters, who lived elsewhere in the city, asking for assistance. She pointed out that one of her daughters reared and sold chickens for a living and that, whenever she slaughtered, she sent her at least two whole chickens to cook and eat with her household. She explained that the chickens were normally given to someone in the mini-bus (travelling from the city to Ha-Khoeli) to bring to the participant's house or to leave at a specified bus stop in the community, where someone could collect it.

4.4.2 Food access

Access to food in this study encompasses affordability, allocation and preference (Ericksen 2008; Ingram 2011). According to 'Malintle and 'Malereko, access to food means having money or being rich. For 'Malimpho, access to food refers to the obtainability of food. She explained that food should not only be seen growing in fields or on the shelves in shops: people should be able to acquire it and eat it. Lastly, 'Maletlotlo defined access to food as the ability of a household to mindfully manage the food at its disposal, to ensure it was not depleted before the next payday.

In addition to hh2's, hh3's and hh4's sourcing of food from their own farming, the study established that the sampled households, including hh1, source food from a mix of shops and supermarkets, friends' and relatives' farming activities, street vendors, local farmers and spaza shops. 'Maletlotlo and 'Malereko in rural Maseru stated that they often made bulk monthly purchases from a combination of foreign-owned shops, street vendors, and farmers in the neighbouring town of Ha Mofoka, where both participants receive their pension funds. The

study established that, on pension-collection day, all the pensioners from the village hire a taxi to and from Ha Mofoka. The participants explained that they often used this opportunity to transport food back to their homes.

'Maletlotlo and 'Malereko argued that the foreign-owned supermarkets often sold food at lower prices compared to the locally owned shops and spaza shops in the village of Ha Khoeli. In addition, they claimed the street vendors and the farmers often sold items to them on credit, which they could settle the following month. Nonetheless, they stipulated that they also bought from locally owned shops (as there are no foreign-owned shops in the village), spaza shops and local farmers (for fresh produce) in the village, making small purchases of food items that ran out before their next trip to Ha Mofoka. It was established that, for 'Maletlotlo, these sources were located within walking distance of her house, with the nearest shop being about 10–15 minutes away from her house. Similarly, the study established that the key local sources of food in 'Malereko's household were within walking distance of her house. According to 'Malereko, one of the local shops in the village of Ha-Khoeli is owned by her relative and, whenever she runs out of any food item but does not have money, she gets it on credit and pays later.

In urban Maseru, 'Malintle and 'Malimpho suggested that they purchased most of their monthly bulk purchases from locally owned shops, with a few items bought from foreign-owned supermarkets. 'Malimpho argued that local shops in her neighbourhood offered lower-than-average prices, although sometimes, for certain non-perishable food items, the foreign-owned supermarkets seemed to sell at lower prices. The study established that the nearest locally owned shop to hh1 was located at a walking distance of five minutes from the house. Likewise, the key local shops and supermarkets from which 'Malimpho buys her food were all observed to be located within walking distance from her house.

All participants answered yes to the question of whether they or any of their household members sometimes lacked sufficient food because of a lack of resources. 'Malintle suggested that there was barely a month in which hh1 did not experience a lack of resources. She stipulated that this experience sometimes became so extreme that the household members went to sleep without food. She asserted that this situation began to occur more frequently after her return home in December 2017 from South Africa, where she used to work. Although the rest of the participants—that is, 'Malimpho, 'Maletlotlo and 'Malereko—also confirmed that they sometimes experienced lack, the study found out that this lack was typically seasonal or

temporary. For example, in hh2, 'Malimpho suggested that she had experienced a lack of food supplies in the recent winter season. She pointed out that the winter seasons were usually cold and dry, resulting in an unconducive environment for the indigenous vegetation usually in abundance in her yard during the rainy season. During this period, she explained, she allocates more funds to buying fuel, such as paraffin, for cooking and warming the house. She also buys blankets and warm clothes not only to keep warm but also to look presentable whenever she goes to collect her pension funds, since the government officials insist that pensioners look this way, or else they are returned home without receiving their funds. In hh4, 'Malereko suggested that she often experienced lack in the month of August, when most of the household funds were used to pay for "stokvel" (savings club) and also for debts from previous months. Lastly, 'Maletlotlo from hh3 indicated that her household had experienced a lack of sufficient funds in the week prior to the study. It was established that such lack was, however, occasional, as 'Maletlotlo stipulated that her pension fund was normally enough to see the household through a month.

'Malintle explained that, due to the intensity of lack in hh1 and the difficulty in obtaining preferred food types, the household often ate food they did not want to. She said that the preferred foods in her household were only eaten in the first few days after her son had received his salary or if such food items were offered by their relatives or friends. In the same way, 'Malimpho and 'Malereko stated that they sometimes ate the kinds of food they did not prefer due to a lack of capacity to purchase preferred foods, particularly meat and meat products. On the contrary, 'Maletlotlo asserted that her household did experience periods of insufficient food, but not necessarily a lack of "preferred" foods. She argued that she was okay with eating some of her preferred dishes once a month. What is important, in her opinion, is ensuring that the household always has the basic foods, which are *papa* and *moroho*. Other types of foods, such as sweet or delicious food eaten simply for enjoyment, are, according to her, a waste of money.

A lack of finances was established as the key issue surrounding most of the sampled households' (hh1's, hh2's and hh3's) increased reliance on sources of food other than their own farming—a trend these households were displeased with. According to 'Malintle and 'Malimpho, sourcing from their own farming is far cheaper than buying from shops or supermarkets. 'Malintle recalled times when her family used to farm and argued that sometimes her family would produce food in their gardens without having to spend even a "black" cent

(that is, without spending any amount of money). She said she believed that the money they currently spent buying a bag of maize-meal from the shops was more than the money they would have spent if they had produced the maize-meal themselves. Furthermore, 'Malintle suggested that the maize-meal she bought from the shops or supermarkets was often too fine and too costly. The most affordable brands, according to her, are so fine that they do not satisfy one for long and sometimes cause constipation. She argued that the maize-meal she grew up eating, and that she used to eat before moving to the city, was coarse, full of roughage, delicious and good for the gut. This type of maize-meal was not available in the shops, she said. While she stipulated that all food came from the soil, she believed it varied in nutrition according to how the grains were grown, harvested and further prepared. Likewise, 'Malimpho believed that eating food sourced directly from subsistence farming, compared to food sold in shops, was good for an individual's health.

Equally, 'Maletlotlo from hh3 recognised that the problem with sourcing from shops was the fact that every time she wished to eat something, she needed to have money to buy it. For this reason and others, she tries by all means not to rely on shops for what she can produce herself. In her opinion, when she used to only rely on her own farming activities, life was simpler and much cheaper:

> Bophelo ba khale ba temo bo bonolo hape ha bo ture ha ho bapisoa le bona ba linako tsa morao moo seng re reka lishopong. (Generally, the traditional lifestyle of farming is simple and much cheaper than the modern lifestyle of sourcing from the shops.)

At the same time, 'Maletlotlo acknowledged shops and supermarkets as important sources of food for her family. She stated that, whenever her family ran out of food sourced from farming, the household turned to shops or supermarkets for substitutes. For instance, when she had a flock of cattle, she used to plough her fields and occasionally get milk and meat; at present, without cattle, she can still eat milk and meat, because she now buys these items. It was established that the participant believes the food she buys from shops or supermarkets is a perfect substitute for the food she produces herself:

> Lebese ke lebese, ho sa tsotellehe na u le haisa likhomong tsa hao kapa u le reka ha motho a ruileng likhomo kapa le hona lishopong. (Milk is milk, whether you get it from your own herd of cattle or the local farmer or even the shops.)

The same belief was held by 'Malereko from hh4. Unlike the other households, she was visibly pleased with the change from producing her own food to relying on shops and other people's produce, although she did acknowledge the difficulties created by a lack of finances. 'Malereko

suggested that shops and supermarkets were more convenient than having to go through the process of producing one's own food. She asserted that, from childhood, she always knew that in order to eat she had to work hard and generate the best yields in her farming activities. For her, the fact that she could now eat without having to first do physical labour was a tremendous gain. She claimed that this change had made her life easier and more enjoyable.

4.4.2.1 Gender roles in food access

As a mother, 'Malintle claimed that it was her responsibility to support her family and buy food for her household, just as her late husband had done when he was still alive. A sense of sadness and helplessness was observed in the participant as she continued to speak about this issue. She emphasised that it was not okay that she had to rely on her son's security job salary, which, according to her, barely enables the family to cover rent, food and other essential household expenses. Although most of the funds in the house come from the son, she suggested that it was either her or her son who walked to the shops to buy food when needed. In hh3, 'Maletlotlo said that she either walked to the shops herself or sent her grandchildren. In hh2 and hh4, with only one household member, both 'Malimpho and 'Malereko argued that they are responsible for purchasing their own food.

4.4.2.2 Coping strategies around food access

The study found that the sampled households adopted several strategies that helped them cope with a lack of resources on a day-to-day basis. In hh1, 'Malintle's son recalled an incident in the past where he had just knocked off from work and did not have any taxi fare to get back home. Since he did not have enough food either, he lacked the energy to walk home. He decided to play homeless and begged for some change from people who were passing by. He stressed that this strategy saved his life that day, as he not only managed to get money to buy some fat-cakes, but the money he received was also enough to pay for his transport back to work later that evening. In addition, he stated that sometimes he looked for odd jobs he could do when he returned from his day job, just so he could get paid something immediately and buy food. During the study, 'Malintle was invited to participate in the process of removing maize grains from the cobs at one of her relatives' homes. She explained that she and the other family friends who had been invited to work were each going to get paid with 10 litres' worth of maize grains. In the same way, 'Malereko said that she sometimes got invited to assist families in the village with their farming activities and in return got paid in whatever type of food she worked with.

She explained that if the food item she helped with was maize, she got paid with a sack of maize; similarly, if it was beans they were harvesting, she got a 10 litre bucket full of beans. Although the farming families sometimes decided to pay the labourers in cash, 'Malereko maintained that she preferred getting paid with food items. She argued that small quantities of such food items were sold in the shops or by farmers at high prices.

As alluded to earlier, visiting friends and relatives, or anyone the participants know in their area, was established as being one of the coping strategies used by hh1, hh2 and hh4 in dealing with their inability to eat their preferred foods because of a lack of resources. In addition to turning to friends and relatives for help, hh1, according to 'Malintle, deals with this lack by inviting themselves to any feasts and funeral gatherings they may identify in the village. In the same manner, the participant in hh2 pointed out that she never worried herself about food if there was a feast nearby in the village, as she would go and eat there. She argued that, as Basotho, they did not need invitations to attend such gatherings. Unless one has an issue with the family hosting the feast, everyone is welcome. Participants attend with the hope of getting a plate of what is often the preferred food they do not have the liberty of eating at home. The participant in hh2 said she, however, ate this food with caution: especially in the city, people cooked a variety of foods that the poor were not always familiar with. She believes eating diverse, unfamiliar foods can result in stomach problems. She therefore emphasised that she always stuck with basic food, which for her is *papa* and meat.

In addition, hh2, hh3 and hh4 get certain preferred food—particularly meat—on credit from shops or street vendors, payable once the participants receive their pension funds. The participant in hh4 also argued that she sometimes prepared a homemade substitute that still provided her with the same level of satiation as the items she could not afford. For example, she said she bought tomatoes and made a fine puree to eat with rice if she could not afford tomato sauce. She argued that, although this puree was not the same as the tomato sauce she got from the shops, tomatoes were far more affordable, and she would still enjoy the homemade sauce with rice the same way.

4.4.3 Food utilisation

According to Ericksen (2008) and Ingram (2011), food utilisation encompasses the nutritional and social value of food as well as food safety. Eating safe, nutritious and socially preferred foods was found to mean different things to the sampled households. According to 'Malintle,

eating safe, nutritious and socially preferred foods means being able to eat the types of food that the entire household needs and prefers whenever they need them, while also having a safe means of storing and preserving food for future use. She also argued that food was safe if it was prepared, cooked and eaten in a clean home or environment. For 'Malimpho, eating safe, nutritious and socially preferred foods means eating food directly from the fields, also referred to as *li-tsoa-mobung* ("coming from the soil"), and not buying from shops or supermarkets. Similarly, 'Malereko defines eating safe, nutritious and socially preferred foods as eating food that comes from her own fields, as opposed to from shops or supermarkets, where the food may be safe and nutritious but one cannot know for certain. The participant further asserted:

> Matsatsi ana re utloa mabare-bare a hore lijo tse re li rekang lishopong, haholo tsena tsa melata li senyehile kapa ba fetola liphutheloana ea lijo ka morero oa ho re phelephanyetsa, joale re le bareki ho so le thata ho tseba ka botlalo lijo tseo ehlileng re li rekang. (These days, we hear of rumours that the food we buy from the shops, particularly from the foreign-owned [Chinese shops], has expired or has been relabelled, making it difficult for us to know what we are truly buying.)

'Maletlotlo, on the other hand, argued that eating safe, nutritious and socially preferred foods referred to the manner in which someone ate. She pointed out that if an individual frequently ate an overloaded plate, not only did this deplete the household's food supplies, but this practice also stretched the individual's cravings and limited their capacity to get satisfied by the available food. In the same way, if someone eats moderately, they get used to being satisfied by a fair amount of food, which is a good habit for advancing the household's food supplies.

The study established that the sampled households prepared and cooked a variety of dishes with the available food items. While some dishes are prepared by the households all year round, the study recognised that certain food items could only be produced seasonally, subject to the availability of resources, and that the corresponding dishes appeared less frequently. The study also established that a variety of dishes were prepared in accordance with certain events or activities. As confirmed by all the participants in the study, most of the available grains and other food items can be prepared in a number of different ways to make delicious Basotho dishes. Nonetheless, the most popular daily dishes in the four sampled households were established as *papa* and *moroho,* with the occasional inclusion of other types of foods.

When asked whether the food consumed provided their households with adequate nutritional value, both participants in urban Maseru ('Malintle and 'Malimpho) responded "yes", while the two participants in rural regions said they did not have enough information to say for sure

and that they believed only a doctor could say. The latter group stipulated that they simply ate food to get satisfied and stay alive. Since her family was still alive, 'Maletlotlo said she had reason to believe that what they were eating was nutritiously good. Moreover, all participants, with the exception of 'Malintle, responded "yes" to the question of whether the food consumed in their households met their social values and personal preferences. According to 'Malintle, the food her family eats does not necessarily meet her personal preferences.

'Malimpho, on the other hand, argued that most of the food she ate came from farming, both her own farming and that of relatives and friends. She pointed out her belief that food that came directly from farming, as opposed to shops or supermarkets, was nutritious and healthy to eat. 'Malimpho believes that someone who eats from their own farming grows to be fitter and stronger than those who eat the fine foods from shops and supermarkets, which are mostly preferred by her grandchildren when they come visit. In hh1, which is highly reliant on sourcing from shops, 'Malintle argued that food labelling was key to establishing that the food they bought provided them with adequate nutritional value.

As Basotho, the participants pointed out that *papa*, whether prepared from white or yellow maize-meal, and whether bought from shops or milled from the maize grown in fields, remains the key staple food in their households. Standard *papa* in the sampled households is a stiff, porridge-like dish made from combining maize-meal and water. In hh1, hh2 and hh4, the dish was observed to be cooked from white maize-meal, while yellow maize-meal was used in hh3. In particular, 'Maletlotlo was observed removing the maize from the cobs and preparing to send it to the mill. On later visits, the participant was also observed cooking *papa* using the maize-meal.

Another version of *papa* recorded by the study was cooked from sorghum meal and was highly favoured by 'Malintle and 'Malimpho, who live in urban Maseru. This dish, according to 'Malintle, is referred to as *sekoeta* ("abductor"). She suggested that this type of *papa* was normally satisfying and full of roughage. For her part, 'Malimpho explained that this was the kind of *papa* she grew up eating and that she has ever since enjoyed its taste over the standard *papa* made from maize-meal. In addition, she claimed that, growing up, her parents had taught her about a certain sickness that was associated with consuming too much maize, *lefu-la-poone* ("maize sickness"), which led her and her siblings to limit their consumption of the standard *papa*.

’Malintle’s son shared a contradicting view about the taste as well as the appearance of the dish. He outlined a list of reasons for why he did not think the dish was delicious. Despite admitting the dish was nutritious and healthy, he argued that he saw no benefit in eating a food item that he could not enjoy. ’Malimpho said she realised that when her grandchildren came to visit her house, they did not seem to enjoy such traditional dishes, which according to ’Malintle and ’Malimpho were healthy despite not looking as appetising as the refined foods sold in shops. ’Malintle argued that it was people with a lack of understanding who preferred these fine foods over those full of roughage. She maintained that fine foods are not only bad for the gut but are also a waste of money, since they provided less satiation and relief from hunger.

’Malintle further stipulated that one of the reasons the older generation was able to live longer and have healthier lifestyles was the fact that they were raised with these kinds of food. In her opinion, the younger generation, fed on refined foods, has not grown up to be as tough as the older generation. She said that, these days, when a child is sick, even if it is something as minor as the flu, the community fears for the family. Equally, she said that it is no shock these days to find adults calling in sick at work. In her view, the current generation often thinks the food full of roughage does not taste good, whereas what they fail to realise is that it is the same food that their parents, the strong generation, ate growing up:

> Sheba motho a kulang molokong oa khale, leha a ka ba ts’oara ke sick e kotsi-kotsi. U tla mo fumana a tsohile, a etsa mesebetsi ea ka tlung, a ea mosebetsing, a etsa ntho e ‘ngoe le e ‘ngoe eo motho a phetseng hantle a e etsang. U so tla bona mohla ba ka oelang fats’e kapa ba e shoa hore efela bokolo bo ne bo ba imetse. Hobaneng? Hobane ba holisitsoe ka lijo tsena tse matlafatsang tse u nahanang hore ha lihlabose ho lekana bakeng sa hao. (Consider a case where someone from our generation is sick, even if it is the most terrible sickness you could ever imagine. You will find them waking up, doing house chores, going to work and doing everything they did when they were healthy. You will only get to understand the intensity of the sickness when they collapse or eventually die from the sickness that indeed they were in pain. Why? Because they were raised from this healthy-eating lifestyle, which you think is not appetising enough for you.)

Another standard dish across all the four sampled households was *moroho*. This dish involves cooking leafy-green vegetables in water, a little bit of cooking oil or fat, and seasoning (such as salt or beef stock). The kinds of *moroho* cooked by the households included spinach, cabbage and other leafy vegetables such as turnips, which were grown by ’Maletlotlo. During the study, the preparation and cooking of cabbage was observed in hh1, hh3 and hh4. According to ’Malintle, store-bought cabbage is the main dish her family eats almost every day. The participants in hh2, hh3 and hh4 suggested that, during the autumn season, they also cook *lepu*,

a type of *moroho* prepared from pumpkin leaves and unripe pumpkins, as well as the green summer squash also known as *solotsi*.

In addition to *moroho* cooked from leafy-green vegetables—grown in participants' gardens or purchased from shops—'Malimpho and 'Malereko pointed out that they also prepared *moroho* from indigenous vegetables *tenane* and *qhela*. According to 'Malimpho, wild or indigenous vegetables (also known as *meroho-ea-sesotho*), herbs and roots can boost the body and improve health. She argued that even doctors confirmed some of the benefits of these crops. She recalled a time where a white doctor called Dr "Jaka" (Dr Jack), who was from outside the country and who worked at the village clinic, would often recommend that his patients ate *meroho-ea-sesotho*. 'Malimpho argued that the doctor would specifically ask patients to avoid consuming cabbage and instead eat *theepe*—pigweed or "amaranthus hybridus"—which he said was far better in terms of nutrition. 'Malimpho thinks that someone must have told the doctor about *meroho-ea-sesotho* or that he might have observed a patient recover from a sickness after regular consumption of *meroho-ea-sesotho*.

In hh4, 'Malereko claimed she also consumed *bobatsi* (stinging nettles) and marijuana, for their medicinal benefits. She argued that, while the standard preparation of *bobatsi* involved boiling the vegetable in water, she sometimes cooked it in fresh milk for an even better taste. She also explained that whenever she boiled *bobatsi* she drew the broth out and drank it on the side, since some people around the village had told her that doing so was good for her blood pressure. She said it had been years since she stopped taking her medication for high blood pressure, which she claimed made her dizzy and worsened her blood pressure. Moreover, owing to the fact that they do not have a clinic in the village, being on medication meant she had to take a taxi to the nearest clinic of Ha Mofoka for check-ups, which, according to her, was too costly. She argued that, ever since she had stopped taking the medication and had been consuming what she referred to as "the miracle plant", together with the seeds she harvested from marijuana, her blood pressure had never been better.

'Malimpho argued that a lot of people today avoided consuming *meroho-ea-sesotho*, claiming they were bitter in taste. She explained that the dish would not be as bitter if people avoided picking mature or overripe wild vegetation. She also suggested that what made the vegetables bitter or not was the fact that people had different ways of cooking. She said that some people made *moroho* bitter, while others did not. An example was made using the wild vegetable *qhela*, which the participants argued had a bitter taste. 'Malimpho and 'Maletlotlo argued that

they often prepared and cooked it but the result was never bitter. 'Malereko, by contrast, stated that, although she liked cooking *qhela*, it sometimes tasted bitter. To resolve this issue, she cleans the leaves and dries them in the sun, making *mashoabatana* or *makoakoa*, which she cooks with other leafy vegetables.

Photo 9: A bunch of stinging nettle plants found in 'Malereko's compound in Ha Khoeli, Maseru (16 September 2018)

Tea in hh2 takes the form of a wild herb that 'Malimpho has growing in several parts of her yard (see Photo 10 below). According to 'Malimpho, this leafy-green plant—which the participant referred to as "Sesotho tea", in contrast to the modern tea sold in shops—is the purest of all the teas she has had in her lifetime. She said there was the possibility that what was sold in the shops was the same herb, just dried and packed in a fancy tea bag—or, even worse, that the store variety contained additional ingredients that people would never consume if they knew about them. This herb was observed to grow in most places in the area, including those outside the participant's compound. 'Malimpho argued that all they knew as Basotho people was buying *sugar* for the tea, as this plant grew in abundance everywhere, precluding the need to buy tea itself. In addition to being consumed for enjoyment, 'Malimpho pointed out

that this tea energised the body. For taste, she said she preferred adding a few leaves of what she referred to as *kuena-ea-sesotho* (Sesotho spearmint), which she believes is even more flavourful and aromatic than regular spearmint. She said she had heard people with high blood pressure saying that drinking the tea helped them curb their blood pressure. Despite being over 70 years old, 'Malimpho explained that she does not suffer from high blood pressure and hence takes no form of chronic medication.

Photo 10: An indigenous plant consumed as tea by 'Malimpho in Lithoteng, Maseru (29 August 2018)

Another dish cooked by the sampled households involves mixing maize-meal and boiling water to make a soft-dropping porridge known as *lesheleshele*, which can be served as a cold or hot beverage. In hh2, 'Malimpho explained that making *lesheleshele* entailed braaing wheat grains and then milling the grains on the traditional stone mill. The milled grains are then sifted to eliminate any unrefined particles, which is particularly essential if the porridge is going to be fed to a baby. This dish, according to 'Malimpho, makes beautiful and strong babies, far healthier than those who are fed modern baby foods like "Nestum" and "Purity". In her opinion, *lesheleshele* is a body booster. She argued that sometimes when she was not well, all it took was a dose of this dish every morning and, in a few days' time, she felt healthy again. Alternatively, 'Malimpho argued that the porridge could be cooked in milk to make *lehala*,

which was also confirmed by 'Maletlotlo in hh3. In hh4, 'Malereko stated that she preferred a similar dish of soft porridge known as *motoho*, which undergoes a process of fermentation and is predominantly made from sorghum flour.

A popular beverage identified in two of the sampled households, hh2 and hh3, was Sesotho beer, also called *mabele* (from sorghum). According to 'Malimpho and to 'Maletlotlo's son, although it should be consumed by elderly people only, Sesotho beer is food. They suggested that the modern beer sold in bottle stores and the pre-mixed brew sold in supermarkets, known as *mamotsatsa*, are—unlike Sesotho beer—too strong, alcohol-wise, and have been too heavily filtered, which removes the residue from the sorghum used for brewing. 'Malimpho further claimed that instead of being satisfying in and of themselves, these beers, when consumed, often produced extreme cravings of meat or anything salty. 'Malimpho argued that Sesotho beer was prepared in such a way that it served not just as beer but also as a satisfying meal. She said the beer had a lot of residue that sat at the bottom of the drink and that this substance was filling. 'Maletlotlo's son shared that sometimes if he has not eaten anything since the morning, having one or two half-litres of Sesotho beer can satiate him, at least until he eats his next meal. He said he believes the thick residue in the beer that usually settles at the bottom of every serving makes the beer stay longer in the stomach and satisfies the need to eat. He explained that, for many Basotho who travel in other parts of the country, where transportation is not easily accessible and where travelling can involve long hours or even days of walking, Sesotho beer serves as a very useful beverage. He pointed out that in almost every Basotho village there are one or two houses that sell this local brew (identifiable by a *phemphesela*, a flag-like plain cloth or plastic bag). According to 'Maletlotlo's son, these houses provide travellers with a place where they can briefly rest and regain their strength before they head out again.

Photo 11: Traditionally produced versus commercially produced eggs, Maseru (16 September 2018)

One of the dishes enjoyed by hh2, hh3 and hh4 was boiled and fried eggs. 'Malimpho said that she purchased eggs from a local farmer who reared chickens for commercial purposes, while 'Maletlotlo and 'Malereko sourced eggs from their own stock of traditionally raised chickens. Both 'Maletlotlo and 'Malereko suggested that eggs from traditionally raised chickens were far better than commercial eggs in terms of taste and nutrition:

> Mahe a khoho tsa Sesotho a monate hampe. Ke lumela ke ka lebaka la mokhoa oo li ho isitsoeng ka ona le lijo tseo re li fepang tsona tse etsang mahe a monate, le nama ea likhoho tsa Sesotho e monate ho feta ea tsena tse rekisoang lishopong. (Traditionally raised chickens lay better eggs in terms of taste. I believe it is how they are raised and what they are fed that makes the eggs rich in flavour. Even the meat from the traditional chickens is far better than the meat you get from shops.)

Photo 12: A Mosotho woman demonstrating the milling process on a traditional stone mill, Lesotho (19 September 2018)

Photo 13: The preparation of *nyakafatane-likhobe-tsa-seotlong* in 'Malereko's home, Ha Khoeli, Maseru (17 September 2018)

During the study, I had the opportunity to make a Sesotho dish with 'Malereko on her outdoor fireplace. The dish is made from beans and sorghum soup and, according to 'Malereko, is referred to as *nyakafatane-likhobe-tsa-seotlong.* Based on my observations, the dish is full of fibre, and its preparation involves the addition of only salt and oil. As Malereko explained, the dish is often prepared on-site during the activity of removing sorghum grains from the stalk, hence the name *likhobe-tsa-seotlong* (meaning "a boiled grain cooked and eaten at the site").

All four participants responded "yes" to the question of whether the food consumed in their households were safe. From observation and from the information accumulated in the interviews, the farming activities of hh2, h2 and hh4 do not involve excessive use of pesticides, making the food safer to consume. Moreover, the participants' preparation and cooking processes do not involve the addition of substances such as artificial colourants and flavours, further adding to the safety of food consumed in these households. Specifically, 'Malimpho argued that many Sesotho dishes relied on the food's natural sweetness as opposed to the addition of seasoning or sweeteners, as she increasingly observed happening in many households these days. She pointed out that the fresh maize and pumpkin sourced from their gardens and fields were often rich in flavour, making it unnecessary to add artificial sweeteners in the various dishes made from these food items. In her opinion, the fields in which crops are grown in both rural and urban regions seem to have run out of minerals, resulting in crops that are no longer full of goodness and that no longer taste as great as past harvests:

> Mehleng ena ke bona batho ba sebelisa tsoekere ha ba pheha mokopu, empa ha ke bone bobe tabeng ena kaha mokopu oa matsatsi ana u so sena tatso. Ha e sa na tsoekere ea tlhaho. (These days, I see people using sugar more in the preparation of pumpkin dishes, but I do not think this is wrong, as pumpkins these days taste bad. They have no natural sweetness.)

On the other hand, the study identified an increasing use of sunflower cooking oil by participants in all the four sampled households. According to 'Malereko, she used to rely on animal fat from cattle or goats, also known as *mohlehlo*, for cooking, which made it essential for her to warm her food every time before serving. Today, however, she claims that she is able to take cold food and still enjoy her meal. On the other hand, although 'Malimpho presently uses sunflower cooking oil for cooking, she explained that her household still followed the traditional way of frying, which does not necessarily involve the use of fat or cooking oil. This way of frying simply involves bringing a pot to the fire and, when the pot is heated up, whatever food needs to be fried is added and does not stick to the pot. She argued that, despite many families' use of cooking oil and addition of spices and other things aimed at making the food nice, with her traditional way of cooking she can prepare dishes far tastier than those prepared with all the additives.

Three of the four participants, 'Malintle, 'Malimpho and 'Malereko, suggested that they barely had enough food to preserve for future use. Rather, they adopt a range of tactics aimed at ensuring that the leftovers from their daily meals do not spoil and that their existing food supplies do not turn bad before consumption. In hh3, 'Maletlotlo reported various methods used by the household to preserve and store food. She said that she often preserved food by drying it in the sun and using fruit cans, and then storing these in one of the rondavels she did not make fire or cook in. According to 'Malereko, rondavels with grass roofing are naturally cooler and have the capacity to store food for longer. This belief was also shared by 'Malereko and 'Malimpho. The preserved food items in hh3, according to 'Maletlotlo, include drying leafy-green vegetables (or *makoakoa*), maize, dried melons (or *sepampeke*), fruits to make *mangangajane*, green beans, and meat to make biltong (or *lihoapa*)—although the latter she seldom preserves due to a lack of supplies. The processes of preservation outlined by 'Maletlotlo did not involve the use of any artificial preservatives. 'Maletlotlo suggested that preserving food meant that her household would get to enjoy the taste of certain produce not only when it was in season but even past its season. She believes her homemade preserved food items are fresher than what she gets from the shops.

4.4.3.1 Gender roles in food utilisation activities

What and how much food is prepared, cooked and served in the sampled households were observed to be mainly determined by the participants, with the rest of household members (in hh1 and hh3) contributing to other activities relating to the preparation of food and cooking, such as collecting water and firewood. As the only woman in the house, 'Maletlotlo argued that it was her responsibility to prepare and cook food for her son and her grandchild. Conversely, while 'Malintle tends to do most of the preparation and cooking in hh1, her son also prepares and cooks food in the family both when she is away and when she is still around. During the study, the son was observed preparing and cooking cabbage. On another occasion, he was seen preparing dough and making bread thereafter. 'Malintle also suggested that her son sometimes served food in the house.

4.4.3.2 Food utilisation traditions

The study established the various rules and traditions that govern the consumption of food in the sampled households. In particular, while some dishes can be consumed by all members of the family, it was revealed that some dishes are gender-specific and can only be consumed by either men or women in the family. Conversely, some dishes are age-specific. For instance, the participants stipulated that soft porridge dishes such as *lesheleshele*, *lehala* and *motoho* were often used as a beverage for adults and also served as good baby food.

On the other hand, 'Malimpho argued that, according to the Sesotho tradition, young girls were not allowed to eat eggs or sheep intestine. This tradition was confirmed by the participants in hh1, hh3 and hh4. As with many other traditions, the participants argued that as children they never questioned why things happened the way they happened; they accepted guidance from their elders and never challenged them. To this day, although she is over 70 years old, 'Malimpho is still afraid of eating intestines from sheep. She argued that the increased consumption of eggs in the neighbourhood and at school encouraged by teachers and other health practitioners for the health and fitness of children made her very angry:

> Taba eno ngoan'aka e'a nkoatisa hobane ona matichere ano a khothallentsang bana ho ja mahe, bona ba hotse ba sa je mahe…mehleng ea rona, re ne re sa lumelloe ho ja likahare tsa nku, re ne re ja feela tsa poli le khomo…re hotse re ja meroho le litlama tsa naha tse matlafatsang 'mele. (That, my child, makes me very angry, because the same teachers that are encouraging kids to eat eggs grew up without eating eggs…During our time, we were not allowed to have intestines from sheep. We could only eat those of goats and cows…We grew up eating indigenous vegetables that boosted our bodies).

4.4.3.3 Coping strategies around food utilisation

Different coping strategies for ensuring food safety were identified among participants. According to 'Malintle and 'Malimpho, these include sourcing fresh and perishable food items from locally owned shops as opposed to the foreign-owned supermarkets in Lithoteng. They argued that local shops were neat and brought in new stock more often than foreign-owned supermarkets, which they said keep food on the shelf for long and were suspected of sometimes selling expired food items. Following a few incidents in which 'Malereko said she realised she had purchased expired tinned goods, she now buys these food items in small quantities, just enough to cook and serve for one day. Even so, due to her inability to read and determine the expiry date for herself, she now relies on her grandchildren or neighbours in this regard when they come to visit her house. In hh3, 'Maletlotlo stated that, as a safety strategy, she always made sure her food was thoroughly cooked before eating, killing any bacteria or germs carried by the food. The same strategy was confirmed by 'Malereko, who pointed out that she cooked her food properly and kept her pots covered to keep flies from getting in.

Different coping strategies were established as being used by the participants on a day-to-day basis to ensure adequate intake of nutritious and socially preferred foods. Three of the participants, 'Malintle, 'Malimpho and 'Malereko, suggested that every now and then they visited relatives and friends, where they got to consume a variety of foods with varied nutritional content. 'Malereko also argued that, whenever she ran out of certain food items, she would substitute them with what was readily available in the household. These substitutes, according to her, bear the same value or satisfaction as the food items that have run out. For instance, she said that at times when she lacks cooking oil she uses fat that she has skimmed from cooking pork, mince-meat or boerewors and stored in a container. Attending feasts and funeral gatherings in the village was also one of the coping strategies pointed out by 'Malintle and 'Malimpho in urban Maseru, as already mentioned. In hh3, 'Maletlotlo argued that her household occasionally ate a variety of food on the days she got paid her pension and on other days that she travelled. She suggested that the same applied for other members of her family.

4.4.4 Participants' perception of the definition of food security

The study established that the sampled households had diverse perceptions of the definition of food security. The participants raised various aspects that were not covered in the popular 1996 food security definition but that were found to be key in defining their own day-to-day food security experiences.

In addition to the four main domains of the food security definition—food availability, food access, food utilisation, and the stability of these components over time—participants suggested that the definition should incorporate other factors that applied in their daily experiences. 'Malintle argued that there were often times when they had food items in the household, but they lacked resources that were not necessarily food but that were essential for converting inedible food to edible food. She pointed out that fuel was one of the resources that often restricted their capacity to prepare and cook food, such that it sometimes became difficult to ensure that edible food was available to the family daily. She therefore suggested that a domain be added that incorporated the ability of a household to convert the available food items into food ready for consumption. For her part, 'Malereko suggested that the appearance of a person was often key in judging whether or not that person was food secure on a daily basis, yet the definition says nothing about the physical appearance of a food-secure person. According to 'Malereko, a food-secure person is one who is healthy-looking and who appears to have sufficient flesh. She argued that when someone appeared this way, it showed that they were eating well and living a life free from sickness.

'Malimpho marvelled at the standard definition of food security and argued that it would be wonderful if in reality she could achieve food security as per this definition. She stated that it was unfortunate that the reality of her household was not reflected in the definition. She pointed out that being able to eat something each day was a privilege: it is usually hard for her to maintain this throughout the month, despite her best efforts. She explained that she often eats what she has available now, but what she has today unfortunately does not last forever and gets depleted. And when it does, she has to worry about food and about simply having something—anything—to eat. As a result, eating food that she prefers or that fits in the nutritional spectrum, as per the definition, is hardly one of her concerns. What is important to her is having something to eat at all.

A similar perception was identified in hh3. 'Maletlotlo stated that the long definition of food security did not necessarily reflect her household's daily experiences. In her opinion, someone is food secure if they have consumed *papa* and *moroho* as well as a bowl of *motoho*, rather than the diverse food-types the definition promotes. She also pointed out that she often felt food secure and satisfied when her family was fed and satisfied. Another element the participant suggested was missing from the definition was related to the proper handling and management of household food supplies. According to the participant, the handling of food by

the individual responsible for food preparation and cooking plays an important role in the household's food security condition. If this person's handling and management capacity is poor, their household runs out of food more often than a household whose cooking is done by someone with a better handling capacity.

4.5 Conclusion

This chapter reported the outcomes of the data-gathering phase, which drew on a comprehensive suite of quantitative food security measures that emphasise the various dimensions of food security. In addition, participant observation, written field notes, audio recordings, photographs, semi-structured interviews and journaling were used to gather data on the various practices, gender roles, traditions and coping strategies surrounding food availability, access and utilisation in the sampled households. The integration of quantitative and qualitative tools in this study capitalises on the strengths of each tool, while offsetting the weaknesses associated with each method in the conceptualisation of food security in Maseru. The elements of emic and etic findings in the study become complementary, allowing for the triangulation of the qualitative findings. This integrative explanatory framework enabled the study to uncover wide-ranging insights into the multiple meanings of food security, based on the lived experiences of rural and urban households in Maseru.

Chapter 5: Discussion and Conclusions

5.1 Introduction

This chapter provides a summary of the study's key findings, conclusions and policy recommendations. It presents the various themes that emerged from the research as potentially relevant to understanding the challenges and opportunities of food security in urban and rural households. These themes are informed by the fieldwork as well as the literature review. The chapter integrates the quantitative and qualitative findings of the study to provide a comprehensive analysis of the research problem and an interpretation of the overall results. The claims derived from the findings of this study are compared or supported through reference to the reviewed literature.

5.2 Main findings of the study

5.2.1 The state of food insecurity in the sampled households

The findings of the study suggest that food insecurity, as defined at the 1996 World Food Summit (WFS), is severe in both urban and rural households in Maseru, Lesotho. The participants suggested that they occasionally lacked sufficient quantities of safe, nutritious and preferred food, with one of the urban households experiencing this lack more frequently. The severity of food insecurity in Maseru was confirmed by the HFIAP indicator, which categorised all the sampled households into the four levels of household food insecurity. All the surveyed households in Maseru were severely food insecure, with an HFIAP prevalence rate of 100%. Similar findings on the prevalence of food insecurity in Maseru have been reported by Leduka et al. (2015) and Frayne et al. (2014). According to these data-based African Food Security Urban Network (AFSUN) studies, the levels of food insecurity in Maseru are among the worst in Southern Africa, with 90% of poor households severely or moderately food insecure.

The study also suggests that participants were continually at risk of being unable to meet their food needs and those of the other members of their households. Based on the Household Food Insecurity Access-Related Conditions, 100% of the sampled households sometimes ate smaller meals than they needed. Nonetheless, the frequency of the risk of failure to meet food needs varied across households, with some participants—'Malintle, 'Malimpho and 'Malereko—experiencing growing structural challenges around availability, access or utilisation. The

calculated food security measures reveal some interesting discoveries and comparisons that provide insight into the food insecurity experiences of the surveyed households.

In order to understand the degree of food insecurity in the sampled households, the study calculated the households' HFIAS scores, which reflect their experience of food access in the month prior to the study. As was evident in the HFIAS scores, 'Malintle, dwelling in an urban region of Maseru, reported an extremely high score of 16, with the lowest score of 6 reported by 'Maletlotlo's household in the rural region. The severity of food insecurity appears to be higher in households in urban regions, which had an average HFIAS score of 13, as opposed to the average HFIAS score of 10 in rural households. Specifically, this difference means that the degree of food insecurity in the sampled households was higher in urban than in rural areas in the previous month. As confirmed in the Chapter 2 review of current food security metrics (Jones et al. 2013), HFIAS scores reflect strong associations between a household's food access and its available resources—that is, wealth and per capita income. Owing to the high dependence of poor urban households on food markets, this relationship becomes significant in urban areas as opposed to rural regions (Cohen & Garrett 2010; McCordic et al. 2018).

Empirically, several studies have confirmed that high degrees of food insecurity in urban areas are associated with a severe lack of resources in households that depend heavily on food purchases (Crush & Frayne 2010, 2011; Crush et al 2011; Frayne et al. 2010, 2014; Leduka et al. 2015; Watson 2009). The results of this study are also in keeping with the findings of Battersby (2012), which showed that the severity of food insecurity was higher at two poor urban Cape Town field sites than in the Klipplaat rural area of the Eastern Cape province of South Africa. McCordic et al. (2018) further illustrated the degree of vulnerability within poor urban households in Maseru with reference to the 2008 food price crisis. Their investigation suggested that the high food prices in Maseru during the year 2008 restricted food access in urban households more than it did in rural households.

The Household Food Insecurity Access-Related Conditions also confirmed that 'Malintle's household—or 25% of the sample—had gone to sleep hungry in the four weeks prior to the study. 'Malintle suggested that every day she battles feelings of uncertainty and anxiety over her and her son's lack of access to sufficient quality food. A sense of uneasiness and distress was observed as the participant explained the implications of this experience as a mother. She believes that, as a mother and an elderly member of the household, it is her duty to take care of her son.

The MAHFP scores of the sampled households reveal the number of months in the past year during which the households did not have access to sufficient food to meet their household needs. The MAHFP scores of urban households were very high compared to those of rural households, with hh1 and hh2 reporting 8 and 5, respectively, and hh3 and hh4 reporting 0 and 1, respectively. The average MAHFP score in urban areas was 0.5, which is far less than the average MAHFP score of 6.5 in urban areas. Months-long shortages of adequate food in urban households were predominantly associated with what has been defined as "hungry seasons" (Battersby 2012). Consistent with the findings of Battersby (2012), this study established that winter months constitute one such hungry period in Maseru, with urban households experiencing increased household expenditure and stagnant or reduced household income during this season.

'Malimpho suggested that, every year during the winter season, she allocates more funds to buying fuel for cooking and warming her house. She explained that she also buys blankets and warm clothes for winter, not only to keep warm but also to look presentable when she goes to collect her pension funds: government officials require that pensioners look this way, or else they are turned away without receiving their funds. While hungry seasons in urban households were for the most part unrelated to fluctuations in food availability, 'Malimpho from hh2 pointed out that, since the winter was usually cold and dry, it produced an environment that was not conducive to the growth of certain indigenous plants that grew in abundance in her yard during the rainy season. These findings are consistent with those of Frayne et al. (2010), which stipulated that, during the dry and unproductive winter months, the levels of adequate food provisioning in urban areas decline, just as they often do in rural areas.

5.2.2 Households' interactions with the food system

In order to investigate how the sampled households interact with the food system at the point of sale, the research made use of the HCFPM. The study considered the various components of the HCFPM, describing and distinguishing household food purchase patterns by frequency, by place of purchase and by location of purchase. It found that the sampled households purchased food from both formal and informal sources, comprising supermarkets (mostly foreign-owned), small formal shops (often locally owned), street sellers and vendors, local farmers and spaza shops. The key food items purchased by the surveyed households in the four

weeks prior to the study included white maize-meal, brown bread flour, brown loaves of bread, cooking oil, salt, sugar, tomatoes, onions, beans, and beef stock.

A combination of supermarkets and small formal shops was the key source for bulk purchases of items such as white maize-meal and brown bread flour, as well as other food items such as salt and sugar. The monthly purchases for the two rural households also included fresh meat (chicken). With the exception of one urban participant who buys a loaf of brown bread every week, the participants said that they only bought brown loaves once a month. For perishable foods such as tomatoes and onions, the frequency of purchase ranged from monthly bulk purchases to small quantities purchased almost daily.

The findings suggest that supermarkets dominate the sale of bulk items in rural regions, while small formal shops dominate bulk sales in urban regions. Despite the lack of supermarkets (mostly foreign-migrant-owned) in rural areas, supermarkets still dominate bulk sales for both ’Malereko (hh4) and ’Maletlotlo (hh3). The remoteness of rural regions, as well as their weak transportation infrastructure, is the main constraint behind slow supermarket expansion in these areas. Nonetheless, rural participants’ monthly trips to the neighbouring town of Ha Mofoka, where both ’Malereko and ’Maletlotlo receive their pension funds, afford them the opportunity to access supermarkets. The participants explained that, on this day, all the pensioners from their village hired a taxi to and from the pension pay station and often used this opportunity to buy food and transport it back to their homes. Both participants stressed that they preferred buying from foreign-owned supermarkets in town, as they often sold food at lower prices than the locally owned and spaza shops in the village of Ha Khoeli. This finding builds on the AFSUN survey in Maseru (Leduka et al. 2015), which found that Chinese-owned shops play a major role in the urban food system in Maseru. As became evident in the present study, these shops also serve as major sources of food for rural households.

Conversely, the urban participants in the study indicated that they patronised locally owned small shops more often than they did the foreign-owned supermarkets found in their neighbourhoods. This was the case for bulk purchases as well as for general food items such as brown loaf, beans, tomatoes and onions. ’Malimpho and ’Malintle in the urban region claimed that this preference was associated with issues of food safety. The food safety aspect is particularly crucial in Maseru, where food products sold in Chinese-owned supermarkets have a negative reputation owing to the allegedly widespread practice of relabelling expired goods (Leduka et al. 2015). Moreover, ’Malintle and ’Malimpho suggested that they preferred

locally owned shops because of their belief that they operated in neat spaces and offered lower prices than the average prices. Even so, 'Malimpho stated that she sometimes bought less perishable food items, such as cooking oil, from foreign-owned supermarkets, where they were occasionally available at lower prices. These results are consistent with those of Crush et al. (2017), who established that small shops were the primary source of purchased food in Maseru, followed by supermarkets, which were shopped at less frequently. The heavy reliance of poor households on the small locally owned shops unique to Maseru, compared with the other cities included in the AFSUN surveys (Leduka et al. 2015), appears to persist despite the presence of large South African supermarkets and a wide range of foreign-owned shops in the urban centres. While urban households are certainly faced with a lack of resources, the study suggests that food purchases made by these households are sometimes influenced by other dimensions of food security beyond accessibility (food utilisation, or simply food safety).

Small formal shops and spazas are the key sources of beef stock, with small formal shops dominating sales in rural regions and spazas dominating sales in urban regions. Furthermore, while small local shops were the main source of beans in urban areas, local farmers dominated bean sales in rural regions. Unlike the imported packaged beans sold in shops, the study established that the beans sourced from local farmers were local produce. 'Maletlotlo suggested that she normally self-supplies or buys from other local farmers when she runs out of food. These findings are consistent with the findings of Frayne et al. (2010), who established that 47% of households in Maseru grow their own food and consume home-grown food on a daily basis. In addition, despite the documented decline in Lesotho's agricultural sector (ESRC/DFID 2008; Maile 2001; BoS Lesotho 2015; Quinlan 1996; WFP 2012), agriculture remains one of the livelihood strategies that rural households in Southern Africa rely on for generating their own produce and as a source of income (Frayne et al. 2010). As confirmed by Davis-Reddy and Vincent (2017), subsistence farming in sub-Saharan Africa is the most widely used method of farming, which the majority of the rural poor depend on for their survival. In addition, 'Maletlotlo and 'Malereko argued that buying directly from local farmers was far cheaper than buying beans from the shops.

Sales of tomatoes, onions, cooking oil and brown loaves in rural regions are dominated by street sellers and vendors in the informal economy, who often buy in bulk from supermarkets and resell items in small units on both a cash and a credit basis. In addition, farmers in rural regions generally sell their products informally (FAO 2010). Past studies by Crush et al. (2017),

Frayne et al. (2010), Battersby et al. (2016), Skinner and Haysom (2016) and Crush and McCordic (2017) have confirmed the critical importance of the informal food economy as a daily source of food for poor urban households in most cities in Southern Africa. In Maseru, Crush et al. (2017) established that around 50% of households regularly sourced food from the informal food economy. Similar results were obtained in a study by Leduka et al. (2015), where 49% of the poor accessed food from informal sources, with this access equally distributed across rural and urban households. The findings of Hitimana et al. (2011) also indicate that informal activities are present in rural areas, and the extent of informal food sources increases with the numerical threshold used to define a town (Hitimana et al. 2011). At the base are "informal" farmers, who depend on collectors for selling their produce and obtaining loans and on rural markets for buying inputs and consumer goods.

This study established that both urban and rural households made local food purchases within walking distance from their homes. In addition, rural households procured bulk purchases at or near the pensioners' pay station at Ha Mofoka, where they go every month to collect their pension funds. These findings highlight the sampled households' convenient accessing of food (Crush & McCordic 2017).

5.2.3 Agriculture as a social and technical activity

The study suggests that urban agriculture is, however, vanishing compared to rural agriculture, with only 'Malimpho from hh2 currently participating in farming practices. In an illustration of this decline, 'Malintle suggested that farming activities in hh1 came to a stop over two decades ago, when her household relocated from a rural village to a rented house in urban Maseru. Most of the topsoil in her current yard is paved with cement, leaving no space for even a small garden near the house, which is where many households living in the city or in rented houses grow crops. 'Malintle's limited capacity to produce her own food can be associated with a lack of access to arable land. These findings are in keeping with the literature on the effects of expanding urban areas on the availability of land for growing crops (Cohen & Garett 2010; Lerner & Eakin 2011). As has been confirmed by Woodfine (2013) and Crush et al. (2017), the loss and lack of access to arable land in urban areas within Maseru appears to be dwindling as the city continues to grow. The expansion of urban areas therefore poses a significant challenge to food production and provision for urban households—a challenge that is not as prevalent for their rural counterparts.

In an interview with Heinrich Böll Stiftung (2011), Battersby suggests that there is a strong correlation between urban households that practiced gardening and households that receive old-age pensions. This correlation was evident in this study, where 'Malimpho, an old-age pension-fund recipient in an urban region, was found to engage in the seasonal gardening of crops, whereas 'Malintle, a non-pensioner in an urban household, was not. In addition, Crush et al. (2017) found out that urban agriculture practices in Maseru had significant associations with food security for middle-income households but not for low-income households. These findings therefore imply that focusing on urban agriculture emphasises the realm of food production and availability but places little attention on other dimensions of food security, which are nonetheless equally important to household food security, particularly in urban areas where farming practices often become unfeasible (Crush et al. 2017). This emphasis on a generalised production-centred approach to food security is associated with what past studies refer to as the outdated perception of Lesotho as an agrarian economy (Crush & Frayne 2010; Turner 2009).

Indeed, according to Crush et al. (2017), urban agriculture does not appear to be widely practised by, or of much benefit to, low-income households in Maseru. While 47% of these households obtained non-purchased food from urban agriculture, only 21% did so on a regular basis, and only 2% obtained some form of income from the sale of urban agricultural products (Crush et al. 2017). This situation is linked to the fact that a substantial portion of poor households have no access to agricultural land, while many of those who do lack the necessary inputs to engage in agricultural production (Cohen & Garett 2010; WFP 2012).

On the other hand, Frayne et al. (2010) maintain the importance of urban agriculture as a source of food among poor households. Cohen and Garett (2010) have suggested that one of the reasons urban agriculture may not seem to benefit low-income households (see Crush et al. 2017) is that urban agriculture tends to be part of the unregulated informal economy, with little hard evidence available regarding this activity's economic value or contribution to food security. However, the importance of urban agriculture to the food security of the urban poor has various dimensions (Frayne et al. 2010). Cohen and Garrett (2010) report that one of its benefits is low cost. 'Malintle and 'Malimpho, in urban Maseru, affirmed that sourcing from one's own farming is far cheaper than buying food from shops or supermarkets. 'Malintle recalled times when her family used to farm and said that sometimes they would produce food in their gardens without having to spend even a "black" cent. She believed that the money her

family currently spends buying a bag of maize-meal from the shops is more than they would spend if they produced the maize-meal themselves.

Even if agriculture's economic importance and contribution to food security in Lesotho are minimal, farming practices remain highly significant in the livelihoods of Basotho—partly because land remains the ultimate fall-back resource of many Basotho (Turner 2005; Turner et al. 2001). Turner et al. (2001) showed that Basotho were not ready, willing or able to abandon agriculture as a mainstay of their livelihoods, which may be associated with Boehm's (2003) stipulation that farming in Lesotho has an intrinsic cultural value characterised by high levels of sociality. That is, farming in Basotho communities is deeply rooted in social processes and also constitutes the backbone of Basotho society. Despite the presence of shops and supermarkets in Maseru, 'Malintle, 'Malimpho and 'Maletlotlo all suggested that they preferred sourcing food from their own farming over buying food, despite the constraints they face in both these areas. 'Maletlotlo maintained that she did not like paying for something that she could have just as easily produced herself:

> Molimo o re file mobu hore re leme, ka lebaka lena, nkeke ka ea lishopong ho ea reka seo nka e itlhahisetsang sona ha bo bebe. (God has given us the soil to farm; therefore, I can never go to the shops to buy what I can just as easily grow for myself).
>
> Bophelo ba khale ba temo bo bonolo hape ha bo ture ha ho bapisoa le bona ba linako tsa morao moo seng re reka lishopong. (Generally, the traditional lifestyle of farming is simpler and much cheaper than the modern lifestyle of sourcing from the shops.)

In 'Maletlotlo's opinion, farming is a lifestyle. It becomes more than a technical activity aimed at producing food, instead encompassing Basotho's socio-philosophical values and life-embedded ideas (Boehm 2003). As established in this study, farming practices in Lesotho are informed, shaped and underlined by socio-ethical and cultural principles, standards, convictions and beliefs (Mofuoa 2015). For instance, one of the customs that emerged during research with the farming households involves ways of engaging with soil during mourning. Another tradition involves a *ngaka-ea-sesotho* (a traditional Sesotho doctor) performing a ritual known as *ho-thakhisetsa-sefako* ("protection from hail"), aimed at protecting all the fields in the area from bad weather conditions such as hail. For this ritual to be effective, 'Maletlotlo explained that, once the traditional Sesotho doctor has performed the ritual, the villagers are expected to follow three rules that govern their conduct in terms of hanging their clothes on the line, collecting and gathering wood, and working in the fields. Other than being an activity from which food is sourced, Mofuoa (2015) and Boehm (2003) argue that Basotho seem to have long understood agriculture as both a technical and a social activity.

5.2.4 Nutrition security

In order to assess the nutritional quality of the diets of the sampled households, the study collected HDD data, which provides information on the types of food groups consumed by the households in the previous 24 hours. The households' HDD scores showed that the two urban households ate from at least five different food groups, while the two rural households ate from four food groups. The meals consumed in the households in the 24 hours prior to data collection were predominantly the starch staple of stiff maize porridge, known as *papa*, and cooked leafy-green vegetables, known as *moroho*, with the occasional inclusion of other food groups. A previous livelihood analysis in Lesotho by Turner et al. (2001) established that *papa*, *moroho* (encompassing both wild and garden-grown vegetables) and *motoho* (a sour soft porridge) constitute the staple diet for very poor households in Lesotho. The present study found that urban households also ate some form of animal protein, while those in rural regions ate none. This was despite the fact that both rural participants were farmers of traditionally raised chickens, from which they said they sourced eggs and meat. These results suggest that rural households have less diverse diets than urban households.

The initial average HDD score, including miscellaneous foods, was 4.5 out of 12. When the non-nutritive food items—tea and traditional Sesotho beer—were removed from the dietary intake of the sample, the average HDD score dropped to 3.75. Based on past studies (Frayne et al. 2010), this score is considered inadequate for achieving good health, as it reflects a lack of diversity in the intake of both macro- and micronutrients. These findings are consistent with the results of the AFSUN surveys, conducted simultaneously in eleven cities in Southern Africa. In Crush et al.'s (2011) Maseru-based survey, 84% of households had HDD scores of 5 and lower, placing Maseru last among the eleven cities studied in Southern Africa in terms of dietary diversity. In another study by Leduka et al. (2015), poor households in Maseru had the lowest dietary diversity, consuming from an average of only 3.4 food groups in the previous 24 hours. A follow-up study by Crush et al. (2017) found that 63% of sampled households had consumed from fewer than four food groups in the past 24 hours. The findings of this study corroborate the work of Frayne et al. (2010) and McCordic et al. (2018), who reported low HDD scores for surveyed households in Maseru. The reported HDD scores suggest that both urban and rural households have diets that are less diverse and nutritionally adequate than normal growth and development require; in this case, rural households experienced this

deficiency more than urban households did. The residual effect of nutritionally poor diets on health is damaging and is associated with multiple chronic conditions (Garthwaite et al. 2015).

5.2.5 Beyond diet and nutrition

The study also established that participants' production and consumption patterns are informed by symbolic and social values. For instance, eggs in several African cultures symbolise fertility and promiscuity; hence, consumption by girls is considered inappropriate (Kroll 2016). This study confirms that eggs, along with sheep intestines, are not supposed to be consumed by young women in the Sesotho tradition. 'Malimpho, who lives in an urban region, argued that, although she is over 70 years old, to date she is still afraid of eating intestines from sheep. She argued that the increased consumption of eggs in her neighbourhood—encouraged by teachers and other health practitioners as a way to promote the health and fitness of children—was against this tradition. She explained that what irritated her about this situation was the fact that the same teachers who encouraged these new practices were raised according to the old practices, which they were now going against. She recalled that she and her siblings grew up eating wild or indigenous vegetables that "boosted" their bodies.

The study therefore reveals a tension between the kind of food deemed to be traditionally appropriate and modern dishes that are promoted as being nutritionally valuable. In addition, the study established that 'Maletlotlo's perceptions about having meals with diverse types of food could be a key reason for the low HDD score in her household. She argued that she is generally okay with eating her "preferred" dishes once a month—often on the day she receives her pension fund. She pointed out that what is more important is ensuring that her family has sufficient supplies of the basic foods, which are *papa* and *moroho*. In her opinion, other types of foods, such as sweet or delicious foods, are eaten simply for enjoyment and not for satiation, making them a waste of money. Although the other participants did not suggest that they were okay with eating their preferred foods once a month, the study established that, like 'Maletlotlo, the rest of the participants mostly ate their preferred foods during the first few days after her son had received his salary, in 'Malintle's case, and during the first few days after receiving their pension funds, in the case of 'Malimpho and 'Malereko. The rest of the month, their daily meals were mainly characterised by two dishes: *papa* and *moroho*. During times of lack, the study established that eating preferred or nutritious food became unimportant to the households. The vital thing, participants suggested, was satiating their hunger. In alignment

with the findings of Garthwaite et al. (2015), these findings imply that, while a variety of foods or nutritional adequacy is key for the attainment of household food security, when resources are scarce poor households often forsake nutritious, quality food in favour of any food that can relieve their hunger.

As confirmed by the HDD data, households' daily consumption in both urban and rural regions is characterised by a heavy reliance on *papa* and *moroho*. Nonetheless, the study established that the composition of the food items used in these staple dishes varies according to the items' production, processing and preparation. Insight was provided by one of the urban participants, 'Malintle, who was born and raised in a rural village and lived there for many years before moving to the city about a decade ago. She explained that the maize-meal she grew up eating was sourced from her family's own farming. Once the maize was harvested, it was sent to a local mill, resulting in a maize-meal that was coarse, full of roughage and, in her opinion, very delicious and good for the gut. She stated that this kind of maize-meal was not available in the shops she bought her food from in urban Maseru. Instead, the maize-meal she can afford to buy from the shops is often too fine, causing problems such as constipation and low satiety. Evidence from Mahgoub et al. (2007) also revealed that while the majority of the consumers in Maseru are aware of food labels as a valuable tool in guiding people to choose healthier food items, for the low income group, food price was rather the main determining factor of the types of food they buy. Frayne et al. (2014) also recognised that although the higher value foods may still be preferred by the urban poor, the nutrient-dense and less processed foods generally cost more whereas less healthy foods tend to be more affordable. These growing consumption patterns of nutrient-poor staples and diets with low fibre content in urban areas increase the caloric intake in non-farming urban households, heightening their susceptibility to chronic diseases as compared to their rural counterparts, who still source food from their own farming and rely on local food-processing mechanisms. Correspondingly, Frayne et al. (2014) identifies that sometimes greater diversity of diets in urban areas does not imply improvements in the households' nutritional quality. Rather, these may even imply the deterioration of the nutritional quality of diets consumed by urban households. This aspect of findings poses a question on the reported HDD scores which suggest that rural households have less nutritionally adequate diets.

In addition, 'Malintle argued that, living in the city, she could no longer enjoy some of the traditional dishes her family in the rural village used to eat. *Papa* cooked from sorghum meal,

also known as *sekoeta*, is one such dish. She suggested that, unlike the *papa* her household cooks daily, this type of *papa* is normally satiating and full of roughage. Nonetheless, a contradicting view emerged from 'Malintle's son. Despite admitting that this dish was good and healthy, he argued that he disliked it due to its taste and appearance. He further pointed out that he sees no benefit in eating a dish that he cannot enjoy when they are options available that he does enjoy. The same contradiction was revealed by the other urban participant, 'Malimpho, who said that she realised that whenever her grandkids came to visit they did not seem to enjoy such traditional dishes. According to 'Malintle and 'Malimpho, despite not looking as appetising as the fine foods sold in shops, traditional dishes are healthier. 'Malintle argued that only people with a lack of understanding prefer fine foods over those full of roughage. She maintained that the former are not only bad for the gut but are also a waste of money, since they tend to provide less relief from hunger. Consistent with the findings of Alkon et al. (2013), these findings indicate that the available sources for food, particularly in urban Maseru, seem to lack socially preferred food items and often do not support the urban poor's preferred ways of living and eating.

While all the participants displayed a high degree of knowledge of how to prepare and cook various traditional Sesotho dishes, these were more predominant in rural households. However, despite living in an urban region with a lack of supply of traditional food items, 'Malimpho said that she also prepared traditional dishes at home. The participant regularly receives food items from her relatives who live in a rural village outside the district of Maseru and who engage in farming activities. These results echo the findings of Turner et al. (2001), who established that food in the form of grains may also be provided by relatives from time to time. Other past studies have also confirmed the importance of rural–urban food transfers for poor urban households (Crush et al. 2017; Frayne et al. 2010). 'Malimpho stated that food items are often sent by bus and then collected from the bus stop by a relative who lives in Maseru. These findings suggest that many urban households have little or no access to food markets that can provide them with traditionally nutritious foods. As confirmed by Crush et al.'s (2011) urbanisation and nutrition study of Southern Africa, traditionally nutritious food systems in cities have been replaced by "modern" industrial food processing and supply systems. On the other hand, this study suggests that there is a discrepancy between the types of food preferred by the younger generation and those preferred by the older generation. The study, however, could not determine if this discrepancy is only prevalent in urban areas or if it is also apparent in rural areas. Further research on this topic might be important.

5.3 Summary of research objectives and responses from the study

The chief objective of this study was to explore the multiple meanings of food security through the lived experiences of rural and urban households in Maseru. In order to gain insight into the day-to-day experiences of the sampled households, the study's sub-objectives are addressed in detail in this section. For each sub-objective, the findings from the quantitative measures of food insecurity are put into conversation with the findings of the ethnographic study on food and foodways in rural and urban Maseru households. The collected data are discussed below in relation to the overarching research question posed in this thesis.

5.3.1 Response to the first sub-objective

The first sub-objective of the study involved investigating how poor households manage food access, availability and utilisation in rural and urban areas, despite the constraints they face.

5.3.1.1 How the poor manage food availability

Three of the four sampled households—hh2, hh3 and hh4—practised some form of farming. For 'Maletlotlo and 'Malereko in the rural region, the study established that food production consisted of rearing livestock and growing garden crops for subsistence consumption. 'Maletlotlo also stated that she engaged in growing field crops. Household engagement in field crops, according to Crush et al. (2017), significantly increases the odds of household food access, and indeed 'Maletlotlo's household had the lowest HFIAS score within the sample. By contrast, 'Malimpho in the urban region said that she only engaged in growing garden crops. This is in keeping with Crush et al.'s (2017) findings on urban agriculture and food insecurity in Maseru, where the authors established that the most commonly practised form of urban agriculture—for over 60% of the surveyed population—was growing garden crops. The present study found that the production of crops in the sampled households is often seasonal and small-scale, with little or no use of pesticides and other chemicals. In addition, it was established that crop farming, particularly in rural households, is characterised by saving seeds from previous harvests, with occasional purchases of seeds from the markets.

The study also shows that the poor tend to source some of their food items from their friends', neighbours' and relatives' farming activities. These items come in the form of gifts or as

payment for the participants' engagement in a friend's or relative's farming activities. As confirmed by Mofuoa (2015), interdependence and the value of sharing in the Basotho community has always been at the core of Basotho livelihood strategies. Inter-household food transfers in both rural and urban regions, as well as the rural–urban food transfers described by 'Malimpho, suggest that traditional institutions of reciprocity continue to function to this day. Although these patterns are declining, several studies have shown that informal economic and social support from relatives, friends and neighbours remains crucial for the household food security of the poor (Leduka et al. 2015; Mofuoa 2015; Turner 2005; Turner et al. 2001). Similar findings have been established in Windhoek, where households source food from rural–urban food transfer (Nickanor 2013).

Gathering and harvesting indigenous vegetables appeared to be another crucial source of food in three of the sampled households. These three households are all headed by participants over the age of 70: 'Malimpho (urban), 'Maletlotlo (rural) and 'Malereko (rural). A range of indigenous vegetables was observed in both urban and rural Maseru during the study. The participants explained that they often use a number of these vegetables to prepare and cook *moroho*, which they can eat with *papa*. In accordance with the reviewed literature (Kroll 2016), the participants argued that indigenous vegetables were highly favourable on account of both their nutritional value and their medicinal benefits, which, according to 'Malimpho and 'Malereko, include keeping blood pressure normal. In contrast with the rural region, 'Malimpho in the urban region stated that many indigenous vegetables and wild roots that were once in abundance in her neighbourhood have increasingly being extinct. She suggested that most of the wetlands in her neighbourhood have been destroyed and that open land has been replaced with houses, affecting the local ecosystem. As a result, she can no longer eat or prepare dishes from a wide range of wild vegetables, as she could before. The increasing challenge of vanishing natural resources, as well as the extreme degradation of the land upon which the livelihoods of many poor Basotho depend, has been confirmed by IFAD (2013). None of the rural participants, however, raised this concern.

5.3.1.2 How the poor manage food accessibility

Poor households spend most of their money procuring the essentials necessary for the preparation of the popular staple dishes *papa* and *moroho*. In urban areas, in contrast to rural areas, this involves sourcing cheap staples with low fibre content. The findings reveal that the urban poor make most of their monthly bulk purchases from locally owned shops, while

foreign-owned supermarkets supply the rural poor. Both the urban and rural poor sometimes access food through friends and relatives, or anyone they know in their neighbourhood, either by simply sharing a meal as part of a visit or by outright asking for food supplies during times of lack. This underscores the importance of social networks in food access for the poor. Informal food sources also play a role in contributing to the food security of the poor, with poor households, particularly those in rural areas, suggesting that they often get food items from street vendors and farmers on credit. The study reveals that meat is a luxury for poor households. Despite occasionally sourcing from their own livestock, the rural poor, like the urban poor, often source cheaper meat products such as Russians (a type of sausage).

5.3.1.3 How the poor manage food utilisation

Based on observation and on the information accumulated from the interviews, the meals served in households, particularly in rural areas, are made up of food items that are produced, processed, preserved, prepared and cooked in a way that maintains the natural nutritional value of the food, coupled with almost no use of chemicals or artificial food additives, such as artificial colourants and flavours. Nonetheless, Lesotho's high reliance on food imports not only leaves the country vulnerable to the effects of regulations (or the lack thereof) elsewhere but also reduces its control over what Basotho eat. George (2014) suggests that some food products reach the markets with no proper documentation and labels, due to poor regulation. Given Basotho households' dependence on food purchases from supermarkets and shops, the country's overreliance on imported food therefore to some extent compromises food safety, and so food security, in both urban and rural areas.

The participants reported different coping strategies for ensuring access to safe, nutritious and socially preferred food. The participants argued that they occasionally ate a variety of preferred food during the days they travelled or got paid their pension funds, in the case of 'Malimpho, 'Maletlotlo and 'Malereko, and for 'Malintle, the day her son gets paid. The same experience applied to the other members of the households with more than one member, that is, hh1 and hh3. Furthermore, 'Malintle, 'Malimpho and 'Malereko, suggested that every now and then they would visit their relatives and friends where they get to consume a variety of foods with varied nutritional content. Attending feasts and funeral gatherings in the village was also one of the coping strategies pointed out by 'Malintle and 'Malimpho in urban Maseru, as already mentioned. Managing food safety in urban region includes mainly patronising from the trusted locally owned small shops as opposed to foreign owned supermarkets. Conversely, 'Maletlotlo

and ‘Malereko in the rural region argued that they always make sure their food is thoroughly cooked before eating to kill any germs that may be in the food.

5.3.2 Response to the second sub-objective

The second sub-objective involved investigating the perceptions held by the poor of the technical terms surrounding food security in real, everyday life. The study established that poor households have diverse perceptions of the popular 1996 definition of food security, comprising food availability, accessibility and utilisation. The participants suggested varying aspects that were key in defining their own day-to-day food security experiences but that were not covered by these technical terms. In hh1, ’Malintle said that a lack of resources to convert available food items into edible food ready for consumption was a major constraint in her household. For ’Malereko, the physical appearance of a person is crucial for judging if someone is food secure or not: according to her, a food-secure person is one who is healthy looking and fleshy, and the technical terms say nothing about this component. Conversely, ’Malimpho argued that the terms did not reflect the reality of her household. She pointed out that simply being able to eat something each day was a privilege and that eating food that she preferred or that fit in the nutrition spectrum, as per the definition, was hardly one of her concerns. What is important to her is having something to eat at all. A similar perception was identified in hh3. In Maletlotlo’s opinion, someone is food secure if they have consumed *papa* and *moroho* as well as a bowl of *motoho*, rather than the diversity of items embedded in the term.

5.3.3 Response to the third sub-objective

The third sub-objective of the study was to provide a description of the foodways that exist among rural and urban households. The study established that patterns of food production and consumption in both urban and rural households are shaped by Sesotho cultural symbols and traditions as well as by narratives that these households adopt in order to attain food security. The extent to which these factors influence households’ food security practices vary, however, with evidence suggesting that they are more widely accepted and hence more influential in rural areas than in urban areas. This study therefore proposes that foodways are not only about meeting food security needs but are equally about understanding the traditions and rules that govern the food choices of the poor on a day-to-day basis. For instance, in this study, *papa* as a staple remains key in Basotho’s daily consumption owing to the symbolic and social value attached to dish. Moreover, while most dishes can be consumed by all members of the family,

the study established that some dishes are gender-specific and can only be consumed by either male or female family members, while others are age-specific. In addressing this sub-objective, the study highlighted why, how and what the poor produce, process, distribute, preserve, and cook as well as consume.

Overall, the study established that the participants form the backbone of the day-to-day management of their households' nutritional needs and subsistence. Participants often cultivate crops and produce food on a small scale. For one of the rural participants, this includes using some of her pension funds to hire paid labour to help in her fields and with other farming activities. The participants also play a major role in the selection and preparation of either purchased food items or their own produce. Three of the participants confirmed that they are mostly responsible for these tasks, while one of the urban participants reported that these tasks are increasingly being shared between all the members of the family. She said that either her or her son walks to the shops to buy food when it is needed. The son further participants in the preparation and cooking of food items as well as in the serving of food. In the rural household with more than one household member, this pattern of duty-sharing was not present. According to the participant, as the only woman in the house, it is her responsibility to prepare and cook food for her son and her grandchild. She also mentioned that she feels food secure and satiated whenever her family is fed and satiated. In other words, the study suggests a diversification of roles around preparation, cooking and serving in urban areas compared to traditional food practices, in which women are solely responsible for the preparation, cooking and serving of food.

Nonetheless, during times where sufficient food supplies were lacking, participants in households with more household members confirmed skipping meals and reducing the amount they ate per serving. This trend was found to be particularly prevalent in the multi-member urban household, where the participant suggested that she eats less to ensure that her son has enough to eat and to take with him to work. Similar results were uncovered by Turner et al. (2001), who found out that whenever households in Lesotho experienced severe food shortages, children would be given priority. This finding highlights the vulnerability of women to food insecurity, as they often try to ensure that the rest of their household is fed and well taken care of before they attend to their own food security and nutritional needs. Frayne et al.'s (2010) observation that food security is a gendered problem, with women being the most impacted, is therefore borne out by this study. Given the significant role of women in household

food security, efforts to promote food security need to take this dynamic into consideration, while also acknowledging the traditional practices and beliefs that still govern gender roles in certain regions.

5.4 Implications and recommendations

The findings of this study reveal that the sampled households in both urban and rural Maseru are severely food insecurity, and that the extent and the consequences of food insecurity vary across geographical regions. These variations are linked to disparate economic and physical environments, as well as to the attitudes, beliefs and traditions that influence households' day-to-day experiences with food and food insecurity. To ensure that appropriate measures and policies are designed to deliver support to households in Lesotho, the complete range of relevant factors—and how these impact household food insecurity—must be taken into consideration, including Basotho socio-cultural values, which mainstream models continue to disregard in favour of economic benefits (Boehm 2003).

Participants' reported coping strategies during periods of inadequate food supplies often allow them to navigate their circumstances only at the time of the crisis. This strategy is, of course, not sustainable for the attainment of household food security in either the short or the long run. For instance, cutting back on food consumption was reported by participants as one of the ways they deal with lack. While this may seem to be a creative way for the poor to advance their food supplies, going without meals, or at least sufficient food intake, reduces their intake of the micro- and macronutrients needed by their bodies on a daily basis to support an active and healthy life, evident in the reported HDD scores. The MAHFP data from this study also highlights the importance of interventions that consider the seasonality of the food security experiences of the poor. The study therefore emphasises the need for interventions that support participants' current coping strategies with more sustainable ways of attaining food security and that foreground seasonal environmental constraints and livelihood changes in both urban and rural areas.

Urban agriculture, and agriculture generally, remains a highly debated avenue of food security in Lesotho. The findings of this study suggest that agriculture in rural regions and, where feasible, in urban regions forms a crucial source of food for the poor. Owing to the subsistence and small-scale nature of agriculture for the poor, related activities are often informal and unregulated, providing little hard evidence of their actual economic value or contribution to the

food security of the poor. Nonetheless, 'Malimpho, 'Maletlotlo and 'Malereko all suggested that they sourced some of their food from their own farming. This is despite the documented decline in Lesotho's agricultural sector (ESRC/DFID 2008; Maile 2001; BoS Lesotho 2015; Quinlan 1996; WFP 2012) and the suggestions made by past studies (Turner 2009; McCordic et al. 2018) that Basotho people pursue food security primarily or entirely outside this sector. Based on the results of this study, and in alignment with Turner et al. (2001), it appears that Basotho are not ready, willing or able to abandon agriculture as one of their many evolving livelihoods strategies. The study suggests that, instead of being disregarded, farming may be crucial for devising agricultural interventions that are grounded in the lived realities of the poor in rural and urban regions, as opposed to the continued emphasis on agriculture as a technical activity.

The study also acknowledges the changing contexts of food insecurity in urban and rural Maseru and hence the need to look for interventions that look beyond production-oriented approaches to food security. The apparent resistance of Basotho to seeking food security outside the agricultural sector may be associated with the intrinsic cultural and social value of farming activities among Basotho people (Boehm 2003). By incorporating an ethnographic study of food and foodways, the research revealed the social factors surrounding agriculture, which could not have been revealed by the survey data alone. These in-depth qualitative findings point to a range of socio-philosophical values that look beyond agriculture as a source of food and instead understand it as a lifestyle. Even with the documented decline in agricultural activities in Lesotho, these values still hold as sufficient life-embedded ideas that construct the social environment in both urban and rural regions. The study suggests that the various foodways of urban poor and rural poor households are often underpinned by these social ideas and that any feasible solutions to food insecurity will need to be in line with the social and economic contexts within which the poor live.

It is becoming increasingly difficult for younger generations of Basotho to rearticulate their elders' dynamic knowledge of wild and indigenous vegetables, also known as *meroho-ea-sesotho*, particularly in urban regions where much productive land has been replaced by infrastructure. The vital role of *meroho-ea-sesotho* in promoting food and nutritional security for Basotho, however, calls for further research into the subject and national efforts to develop conservation areas and document existing indigenous-plant knowledge. This might help ensure

that future generations enjoy the same nutritional and medicinal benefits of such crops that the current generation does.

The reported average HDD score reflects lack of diversity in the intake of macro- and micronutrients necessary for achieving good health in both urban and rural households, with rural households experienced this deficiency more than urban households did. One of the reasons for this deficiency was revealed by the qualitative data as a result of lack of adequate nutrition education and the knowledge of food items that contributed to healthy diets. This is particularly true in the rural areas where both 'Maletlotlo and 'Malereko stipulated that they ate food to get satisfied and stay alive, and that it was only the doctors that can say for sure if the food consumed in their households provided their households with adequate nutritional value. These findings highlight the need for nutrition education programmes to implement a strategy through which the rural poor can be educated about the various foods that contribute to a healthy diet. For this strategy to be effective, the study suggests that these programmes need to be informed by the daily food experiences, choices and habit of the poor. This way, the programmes will be able to bridge the gap between such awareness to their actual practices

The study also highlights the complexity of nutrition security in urban households and establishes that the relationship between food availability or food access and nutritional status is not automatic. While the HDD data suggest that rural households have less diverse diets more than urban households, the ethnographic data in contrast established that the composition of the food items consumed vary across regions based on the items' production, processing and preparation. That is, the consumption of nutrient-poor staples and diets with low fibre content in urban households as compared to rural counterparts, suggest that sometimes greater diversity of diets does not imply improvements in the households' nutritional quality. This aspect of findings discloses the importance of understanding the various determinants of nutritional outcomes in urban food insecurity, suggesting a need for further research that will facilitate the designing of more holistic food programmes and policies.

Despite being considered a non-nutritive beverage in the calculation of average HDD, and therefore being removed from the overall score, traditional Sesotho beer was found to be a satiating beverage for many participants and equal in their view to food. Further research is needed to confirm the correct categorisation of Sesotho beer when it comes to analysing the food security realities of Basotho people.

The multiple meanings of food insecurity and the associated technical terms confirm the evolving and continual recreation of food security phenomenon in the real, everyday life of the poor. While some of the participants meaning of these popular terms reconciled with the popular food security terms, most of the definitions were based on their everyday realities which were not appropriately covered in the terms. Overall, in addition to the four main domains of the food security definition—food availability, food access, food utilisation, and the stability of these components over time—participants suggested that the definition should incorporate other factors that applied in their daily experiences. The results of the study also suggest that these not only vary across time but vary across regions. Consequently, the food security agenda and policies need to consider the complexity embedded in the lived experienced of household food insecurity rather than simply narrowing the meanings into a few sets of ideas.

Lastly, the survey data emerging from the measurements used in this study indicate various aspects of household food security key to identifying any variations between the lived food security experiences of urban versus rural households. While some of the participants perceptions of these terms reconciled with the popular food security definition covered by the survey data, others did not. The adoption of an ethnographic study of food and foodways in this research therefore "filled in the gaps" in the food security information not adequately covered by the quantitative measures, but vital for analysing as well as interpreting the research results. It provides comprehensive information on the production and consumption patterns and other aspects of food for the poor, while also highlighting the variation in the context and the key sociocultural characteristics of the sample under study. This aspect of the findings highlights the importance of an ethnographic study of food and foodways in understanding food insecurity through the eyes of those with direct lived experience. Furthermore, the reported ethnographic data provides improved information for a holistic and creative food security strategy than simply narrowing the meanings into a few sets of ideas. Based on these results, more food and foodways ethnographic research in understanding variation in food security across regions is warranted.

5.5 Concluding remarks

Food insecurity in Lesotho persists in both urban and rural households. This study has revealed that all the sampled households in both regions are severely food insecure. While some similarities emerged in the drivers as well as the consequences of food insecurity in urban

versus rural Maseru, the primary factors governing food insecurity varied across the two regions. For instance, the differences reflected in the HCFPM data suggest that locally owned shops and foreign-owned supermarkets are an important source of food for the poor in both urban and rural regions. Despite a lack of supermarkets in rural Maseru, both rural participants said they sourced most of their bulk food from the foreign-owned supermarkets at Ha Mofoka, the neighbouring town, rather than from the many locally owned shops and spaza shops in their village of Ha Khoeli. From the latter sources, the participants will buy certain food items if these run out ahead of the participants' monthly trip to Ha Mofoka, which coincides with their receiving their pension money. In the urban region, however, the study established that the participants patronise locally owned shops more often than they do foreign-owned supermarkets, despite the concentration of foreign-owned supermarkets in their neighbourhoods.

The study identified variations not only in food insecurity determinants and experiences across the two regions but also within households in the same region. In rural Maseru, for instance, the HFIAS survey data indicate that the severity of food insecurity is notably higher in hh4, with a HFIAS score of 14, than in hh3, with a score of 6. These variations are partly the result of a complex interweaving of elements from both "modern" urban food systems and "traditional" rural food systems, which were found to co-exist within each region in Maseru. Therefore, food security in either region can be imagined as situated along a continuum of different factors—environmental, economic and socio-cultural—that are often heavily interconnected and that have a compounding effect, collectively influencing the day-to-day experiences of rural and urban households. The variations in these factors from region to region and from household to household call for context-specific conceptual framings and policy responses.

The quantitative results in this study generally supported the ethnographic findings and vice versa. However, some results differed in important ways. For instance, the HDD data suggest that rural households have less diverse diets than urban households, while the ethnographic data proposed that sometimes greater diversity of diets in urban households does not imply improvements in the households' nutritional quality (i.e. non-nutritive food consumption). In such cases, the survey data provided a statistical representation that is too rigid to sufficiently reflect the reality of everyday household food security. Still, on reflection of the complementarity of the mixed methods adopted in this research, the approach generally

provided insights into the production and consumption processes of urban versus rural food insecure that lent credibility and robustness to the findings as well as each aiding each other in discovering data that might otherwise have been excluded from the investigation. The combination of quantitative and qualitative methods could thus further help identify the direction for further research to allow for an expanded conceptualisation of food security based on the lived experiences of both rural and urban households.

Finally, the dominant understanding of food security in Lesotho appears to be insistently bound to data from quantitative surveys and measurements, which conceptualise food insecurity as an inherently rural challenge. This conceptualisation of food security not only limits the existing national potential of food security interventions and planning to rural solutions, while overlooking urban food insecurity as a simultaneous but somewhat different challenge that requires specific solutions that cannot be solved by artificially importing proposed dominant rural-based solutions. This study proposes that the opportunities for supporting and enhancing the food security of the poor are embedded in households' everyday lives and food practices. Its findings highlight the significance of devising food security measures that take into consideration the shifting economic, social and cultural food practices of the poor in both rural and urban regions.

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Appendix A: Qualitative Questionnaire

Household food experiences, beliefs and practices Interview Guide

(for poor households in urban and rural Maseru)

Respondent:

Name of researcher: Date:

Biographical Information

Location of the household: …….

Key livelihood: ……...

Food practices and meanings

The section includes themes that relate to the daily household food activities (and the associated socio-cultural meanings) from production to consumption and the associated changes in the activities. The questions that follow will guide the participant observation research process.

Food sources

1. Where do you mainly get your food from (supermarket, discounters, spaza, borrow, grow, market, informal street trader)?
2. Has where you get food from changed over time? (ie In the last year, 10 years, since childhood)? If yes, how so?
3. If there is a change, how does this change make you feel?

Food distribution

1. How does food reach your household from these different sources you get your food from?
2. Have these ways in which food reach your household changed over time? If yes, How?
3. How does this change make you feel?

Food preparation

1. How does your family prepare and cook food?
2. Who is responsible for preparing food in your household?

3. Did the ways the family prepare its food change? If yes, How?
4. How does this change make you feel?

Food preservation

1. How does your household store and preserve food for future use?
2. Did any of the household preservation strategies change? If yes, how?
3. How does this change make you feel?

Food consumption practices

1. How many times does your household eat in a day?
2. What times does your household eat breakfast, lunch and supper)?
3. How is food served in your household?
4. How often (daily or occasionally) does your household eat a meal together?
5. What meals (type of food) do you eat daily?

Food security experiences

The category covers the themes that indicate the presence of food insecurity in a household.

Availability of food

1. Where does food for your household come from?
2. Does your household sometimes lack sufficient quantities of appropriate food? How often does this happen?
3. How do you deal with lack of sufficient quantities of adequate food on a day-to-day basis?
4. Describe what the availability of food means to you?

Access to food

1. How do you and other members of your household get your food?
2. Do you or any of the household members sometimes lack sufficient food because of lack of resources? How often does this happen?
3. Do you or any member of your household sometimes eat the kinds of foods you did not want to eat because of a lack of resources to obtain preferred foods? How often does this happen?
4. How do you deal with;
    a) Lack of sufficient food because of lack of resources on a day-to-day basis?

   b) Inability to eat preferred food because of lack of resources on a day-to-day basis?
5. Describe what it means to you to have access to food?

Utilisation of food

1. Is the food that you and other members of your household eat safe to consume?
2. Does the food that you and other members of your household consume provide you with adequate nutritional value?
3. Does the food you and other members of your household consume meet your social values and personal preference?
4. Describe the copying strategies of your household on:
   a) Food safety
   b) Nutritional value
   c) Social value
5. Describe what it means to you to eat safe, nutritious and socially preferred foods?

The perception of the poor on definition of food security

The definition of food security encompasses food availability, food access, food utilisation and their stability over time. Do you think the use of these terms cover the real meaning of food insecurity as lived and experienced in everyday life?

Appendix B: Observation Guide

Household food experiences, beliefs and practices Observation Guide

(for poor households in urban and rural Maseru)

Observe the physical characteristics of the setting

Observing the environment / atmosphere of the household. What it looks like, smell like and feel like?

Food practices and habits

Observe daily food practices relating to: Food production
Food distribution
Food preparation
Food preservation

What is the timing and location of the activities?

What processes and beliefs inform these practices and habits?

Who are the key actors in each practice?

Based on prior knowledge and experience of the observed themes, is what is observed different or like the background knowledge?

Food security

Observe the food security experience of a household:

- By observing where the household sources its food and whether the available food is sufficient and adequate.
- Observing how the family gets food.
- Observing how the household utilises food.
- What thoughts are you having about what is going on?

Observe the coping strategies of the households

Observation of the emerging emotions during the interview session will also be noted.

Appendix C: Quantitative Questionnaire

PART 1: Household Food Insecurity Access Scale (HFIAS) (adapted from Coates et al. 2007).

Notes:

- Each question above is asked with a recall period of four weeks (30 days). The respondent is first asked an occurrence question, that is, whether the condition in the question happened at all in the past four weeks (yes or no).

- If the respondent answers "yes" to an occurrence question, a frequency of occurrence question is asked to determine whether the condition happened:
  - Rarely (once or twice in the past four weeks)
  - Sometimes (three to ten times in the past four weeks)
  - Often (more than ten times in the past four weeks)

No.	Question	Response options	Code
1	In the past four weeks, did you worry that your household would not have enough food?	0 = No (skip to Q2) 1 = Yes	
1.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
2	Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?	0 = No (skip to Q3) 1 = Yes	
2.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
3	Did you or any household member have to eat a limited variety of foods due to a lack of resources?	0 = No (skip to Q4) 1 = Yes	
3.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
4	Did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	0 = No (skip to Q5) 1 = Yes	
4.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
5	Did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	0 = No (skip to Q6) 1 = Yes	
5.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
6	In the past four weeks, did you or any household member have to eat fewer meals in a day because there was not enough food?	0 = No (skip to Q7) 1 = Yes	

6.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
7	Was there ever no food to eat of any kind in your household because of lack of resources to get food?	0 = No (skip to Q8) 1 = Yes	
7.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
8	Did you or any household member go to sleep at night hungry because there was not enough food?	0 = No (skip to Q9) 1 = Yes	
8.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	
9	Did you or any household member go a whole day and night without eating anything because there was not enough food?	0 = No 1 = Yes	
9.a	How often did this happen?	1 = Rarely 2 = Sometimes 3 = Often	

PART 2: The Household Food Insecurity Access Prevalence (HFIAP) Status indicator

Note:

The HFIAP calculation is based on the answer frequency-of- occurrence questions in Part 1.

Question	**Frequency**		
	1=Rarely	**2=Sometimes**	**3=Often**
1.a			
2.a			
3.a			
4.a			
5.a			
6.a			
7.a			
8.a			
9.a			

Categories of food insecurity (access)	
	Food secure
	Mildly food insecure
	Moderately food insecure
	Severely food insecure

PART 3: Household dietary diversity (HDDS) (adapted from Bilinsky & Swindale 2006).

Notes:

- The previous 24-hour period should be determined as "usual" or "normal" for the household. If it was a special occasion, such as a funeral or feast, or if most household members were absent, another day should be selected for the interview
- Place ONE (1) in the box if anyone in the household ate the food in question or a ZERO (0) if no one ate the food.
- The HDDS value is equal to the total number of food groups consumed by members of the household, that is, Sum (A + B + C + D + E + F + G + H + I + J + K + L).

What types of foods did you or anyone else in your household eat yesterday during the day and at night (a 24-hour recall method is adopted). **List of foods:** ……. ……. …….	
12 Food groups and examples	Coding categories
A. Cereals Papa (stiff maize meal porridge), motoho (sour sorghum porridge), bread, biscuits, cookies, breakfast cereal, or any other foods made from maize, rice, wheat, or sorghum	A [ ]
B. Root and tubers Any potatoes, carrots, beetroot or any other foods made from roots or tubers?	B [ ]
C. Any vegetables Moroho (a green wild crop that is cooked, but also any cooked green leafy vegetable), spinach, sepaile (or wild mustard leaves), rape (radish leaves), kale, tomatoes, green beans.	C [ ]
D. Fruits Peaches, apples, oranges	D [ ]
E. Meat, poultry, offal Beef, pork, lamb, goat, chicken or other birds (or any fresh meats) Polony, sausages (or any processed meats)	E [ ]
F. Eggs Eggs or items made with eggs	F [ ]
G. Fish and seafood Pilchards, tuna, hake; canned, fresh, frozen	G [ ]
H. Pulses/legumes/nuts	H [ ]

Foods made from beans, peas, lentils, or nut	
I. Milk and milk products Milk, feta, yogurt	I [ ]
J. Oil/fats/butter	J [ ]
K. Sugar/honey	K [ ]
L. Miscellaneous Any other foods, such as condiments, coffee, tea	L [ ]

Part 4: Months of Adequate Household Food Provisioning Indicator (MAHFP) (adapted from Bilinsky & Swindale 2006).

Notes:

- The previous 24-hour period should be determined as usual or normal for the household. If it was a special occasion, such as a funeral or feast, or if most household members were absent, another day should be selected for the interview.
- Values for A through L will be either ZERO (0) or ONE (1). Place "1" in the box if months during which you did not have enough food to meet your family's needs or a "0" if you did. If the answer to Question 1 was No, then responses A-L of question two should be coded as zero (0).
- MAHFP value equals the twelve months minus the total number of months out of the previous 12 months that the household was unable to meet their food needs, that is, 12 - Sum (A + B + C + D + E + F + G + H + I + J + K + L).

Questions	**Categories**	**Skip**
1. Were there months, in the past 12 months (starting with the current month), in which you did not have enough food to meet your family's needs?	0 = NO 1 = YES	IF NO, END HERE
1. If yes, which were the months in the past 12 months during which you did not have enough food to meet your family's needs?		
A. January	A [ ]	
B. February	B [ ]	
C. March	C [ ]	
D. April	D [ ]	
E. May	E [ ]	
F. June	F [ ]	
G. July	G [ ]	
H. August	H [ ]	
I. September	I [ ]	
J. October	J [ ]	
K. November	K [ ]	
L. December	L [ ]	

PART 5: The Hungry Cities Food Purchases Matrix (HCFPM) (Adapted from Crush and McCordic, 2017).

Food items	Whether purchased	Brand of the item purchased	Frequency of purchase	Purchase source	Purchase location
White maize-meal					
Yellow maize-meal					
White bread flour					
Brown bread flour					
White loaf					
Brown loaf					
Sorghum flour					
Rice					
Beans					
Peas					
Pasta					
Cooking oil					
Tea					
Coffee					
Salt					
Sugar					
Milk					
Cabbage					
Other ‘moroho’					
Tomatoes					
Onions					
Potatoes					
Pumpkin					
Beef stock					
Spice					
Braai pack					
Fresh meat (chicken)					
Polony					
Russian					
Frozen chicken livers					
Frozen chicken gizzards					
Soup pack					
Frozen Chicken feet					
Frozen chicken necks					
Canned fish					
Margarine/butter					
Fat-cakes					
Chips					
Eggs					